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LEAA Police Equipment Survey of 1972 Volume I: The Need for Standards--Priorities for Police Equipment

R. Ku, E. Bunten, P. Klaus

Technical Analysis Division
Institute for Applied Technology
National Bureau of Standards
Washington, D. C. 20234

July 1973

Prepared for
National Institute of Law Enforcement and Criminal Justice
Law Enforcement Assistance Administration
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U. S. DEPARTMENT OF COMMERCE, Frederick B. Dent, Secretary

NATIONAL BUREAU OF STANDARDS, Richard W. Roberts, Director

REPORTS FROM THE LEAA POLICE EQUIPMENT SURVEY:

The present report is one in a series of reports produced from data gathered by the LEAA Police Equipment Survey of 1972. Listed below are the seven reports of that survey.

National Bureau of Standards Report 73-210. LEAA POLICE EQUIPMENT SURVEY OF 1972, Volume I: (The Present Report) The Need for Standards -- Priorities for Police Equipment.

National Bureau of Standards Report 73-211. LEAA POLICE EQUIPMENT SURVEY OF 1972, Volume II: Communications Equipment and Supplies.

National Bureau of Standards Report 73-212. LEAA POLICE EQUIPMENT SURVEY OF 1972, Volume III: Sirens and Emergency Warning Lights.

National Bureau of Standards Report 73-213. LEAA POLICE EQUIPMENT SURVEY OF 1972, Volume IV: Alarm Displays, Security Equipment, and Surveillance Equipment.

National Bureau of Standards Report 73-214. LEAA POLICE EQUIPMENT SURVEY OF 1972, Volume V: Handguns and Handgun Ammunition.

National Bureau of Standards Report 73-215. LEAA POLICE EQUIPMENT SURVEY OF 1972, Volume VI: Body Armor and Confiscated Weapons.

National Bureau of Standards Report 73-216. LEAA POLICE EQUIPMENT SURVEY OF 1972, Volume VII: Patrolcars.

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A. Background (p. 1)

- Law Enforcement Standards Laboratory (LESL) was established in 1970 as part of the NILECJ Equipment Systems Improvement Program (ESIP).

- NILECJ asked the Behavioral Sciences Group of National Bureau of Standards to develop and carry out a procedure to get information from the users of law enforcement equipment.

- "User" information would aid NILECJ in setting priorities for LESL programs and would provide some detailed information so that research to develop standards could begin.

- In addition, gathering information from the users would help to make police agencies aware of LESL and ESIP.

- A nationwide mail sample survey was selected as the best procedure to collect user information.

- An Equipment Priorities Questionnaire (EPQ) and 6 Detailed Questionnaires (DQs) were developed and administered. A separate report was prepared for each of these seven questionnaires.

B. Design of Questionnaires (pp. 10-12)

- Questionnaires were developed in conjunction with NILECJ, LESL, and cooperating police departments. Questionnaires were pretested at various times with approximately 45 police departments.

- The EPQ was designed to provide information about needs for standards for various types of equipment.

- A list of categories of equipment was developed (9 categories: Building Systems, Communications, Detection Systems, Emergency Warning Equipment, Lethal Weapons, Non-Lethal Weapons, Protective Equipment and Clothing, Security Equipment, and Vehicles).

- 9 Lists of equipment items within each of these categories were developed.

- Each respondent ranked the items in each list (taking each list separately) in terms of needs for standards for the items within his own department.

- In addition, the EPQ asked for data about numbers of full- and part-time officers, activities performed in the department, budget, size of jurisdiction, etc.

- The six DQs (Alarms, Security and Surveillance Equipment; Communications Equipment and Supplies; Handguns and Handgun Ammunition; Lights and Sirens; Body Armor and Confiscated Weapons; and Patrolcars) were each developed separately.

- The DQs asked about kinds and quantities of equipment in use, problems with existing equipment, suggestions for improving equipment, needs for standards related to the equipment, etc. Although entitled Detailed Questionnaires, these questionnaires were designed to give an overview of the use of specific items of equipment.

C. Sample (pp. 2-7, and Appendix B)

- The population sampled was made up of all police departments listed in a computerized file compiled and maintained by the LEAA Statistical Service.

- Courts, correctional institutions, forensic labs, special police agencies, etc., were excluded.

- The sample was stratified by LEAA Geographic Region (10 Regions) and by Department Type (7 Department Types: State police; County Police and Sheriffs; City Departments with 1-9 officers; City Departments with 10-49 officers, City Departments with 50 or more officers, excluding the Fifty Largest Cities; the Fifty Largest U.S. Cities by population; and Township Departments.

- Overall, approximately 10% of the 12836 departments in the population were selected as respondents. (See Table 1.2-2 and Table 1.2-3.)

- The Equipment Priorities Questionnaire was sent to every sample department (1386). Each Detailed Questionnaire was sent to all States, to all of the Fifty Largest Cities, and to a randomly selected subsample of the main sample (about 530 departments received each DQ).

- Therefore, States and the Fifty Largest Cities were asked to fill in all seven questionnaires. Each of the remaining 1186 departments were asked to fill in the EPQ and two of the DQs.

D. Questionnaire Administration (pp. 7-10, and Appendix C)

- Stringent control of administration was required.
- Introductory letters were sent to heads of departments asking cooperation.
- On June 1, 1973, questionnaire packages mailed.
- In July 1972, follow-up by self-return post card was begun.
- In August 1972, follow-up by telephone was begun. Departments which had not returned questionnaires were called. Also, calls were made to clear up ambiguities in the returned questionnaires. About 1300 calls were made. About 70% of the sample departments were called at least once.
- Each questionnaire was edited and coded by a specialized team to ensure consistency; they were then keypunched and tabulated.
- Completed questionnaires were accepted for tabulation through January 7, 1973.

E. Rates of Return (p. 20)

- 83% of the 1386 departments returned usable EPQs.
- 81-85% of the DQ subsamples returned usable questionnaires.
- Highest rates of return (over 90%) were from States, the Fifty Largest Cities, and Cities with 50 or more officers.
- Lowest rates of return were from Counties and Townships (less than 75%).

F. Analysis of Rankings (pp. 20-22, and Appendix D)

- Objectives were: (1) Establish "composite rankings" for all departments, all cities, each Department Type and each Region; and (2) Determine the levels of agreement of rankings within these 19 aggregates.
- Composite rankings were formed separately for each list, for each aggregate.

- The composites were computed from scores that were made up of three elements: (1) The rank assigned to an item transformed such that poorer ranked items received exponentially less importance than better ranked items; (2) A weight that corresponded to the sampling ratio of the cell from which a department was selected; and (3) A weight that corresponded to the number of full time officers in a department.

- Coefficients of Concordance were calculated to determine levels of agreement.

- 95% confidence intervals for each composite were calculated.

II. SUMMARY OF RESULTS

A. Characteristics of Responding Departments (pp. 16-23)

- The activities most commonly carried out by the respondents were Serving Traffic and Criminal Warrants (88%), Traffic Safety and Traffic Control (87%), and Intra-departmental Communications (87%).

- All of the responding Fifty Largest Cities said they provided In-House Training and Criminal Investigations. This compared to 68% and 86%, respectively, of all responding departments.

- Only 13% of all respondents had Crime Laboratories. 73% of the Fifty Largest Cities and 55% of the States had Crime Laboratories.

- About three-fifths of the departments in all Department Types were providing Emergency Aid and Rescue: Ranging from 60% of the Cities with 50 or More Officers to 67% of the Counties.

- Overall, the reported Equipment Budgets represented somewhat over 10% of the Total Budgets reported.

- Among Department Types, there was a wide range of total equipment expenditures: From a mean of about $10,000 for Cities with 1-9 Officers to a mean of almost $2.6 million for the Fifty Largest Cities.

- One of the Fifty Largest Cities reported an Equipment Budget of $40 million.

- Overall, the Fifty Largest Cities reported a mean of 2491 Full-Time Sworn Officers. However, one of the Fifty Largest Cities had 27% of all the Full-Time Officers reported by that Department Type and another had about 12%.

- The mean numbers of Full-Time Sworn Officers reported by the seven Department Types were

Mean No. Full-Time Officers	Department Type
2491	Fifty Largest Cities
889	State
132	City with 50+ Officers
60	County
22	City with 10-49 Officers
14	Township
8	City with 1-9 Officers

B. Categories of Equipment (pp. 24-30)

- Two of the 9 categories of equipment were said to be of high importance for standards by all classes of departments: Communications and Vehicles.

- 39% of the respondents ranked Vehicles number one, and 33% of the respondents ranked Communications number one. About three-quarters of the responding departments ranked these two categories in one of the first three positions.

- Building Systems tended to receive low priority ranks from most of the aggregates of respondents: It was ranked 8th or 9th of nine categories by five of the seven Department Types.

- About 70% of the respondents ranked Building Systems either 7th, 8th, or 9th.

- The National Composite Ranking for the Categories List was

Rank	Category
1	Communications Equipment and Supplies
2	Vehicles
3	Protective Equipment and Clothing
4	Weapons, Lethal and Related Ammunition
5	Weapons, Non-Lethal
6	Emergency Warning and Rescue Equipment
7	Detection Systems
8	Security Equipment
9	Building Systems

- The "level of agreement" among Department Types and Regions and within Department Types and Regions was very high.

- 42% of the departments that ranked Communications number 1 gave as their reason "We plan to buy this kind of equipment in the near future. Standards would help us to select the best equipment at the least cost."

- 57% of the departments that ranked Vehicles number 1 gave as their reason "We now have maintenance and repair problems with much of this kind of equipment. Standards might solve these problems."

C. Communications Equipment and Supplies (pp. 34-

- Of the 9 items in this list, the 3 items basic to most communications systems were said to need standards most: Mobile Transceiver, Base Radio Transceiver, and Hand-held Transceiver.

- These 3 items were ranked either 1, 2, or 3 in six of the seven Department Type Composites and in eight of the ten Regional Composites.

- The National Composite Ranking for the Communications list was

Rank	Equipment Item
1	Mobile Transceiver
2	Base Radio Transceiver
3	Hand-held Transceiver
4	Digital Data Communications
5	Scramblers
6	Car Locators
7	Repeater Transceiver
8	Tele-printer Communications
9	Helmet with Built-in Transceiving Capacity

- o Respondents tended to make more comments about the use of the items on the Communications list than any other list.

D. Vehicles (pp. 44-49)

- The Patrolcar was the top priority item in every Vehicle Composite; 74% of the respondents ranked Patrolcars number 1.

- The Fifty Largest Cities ranked Motorcycles 2nd and Scooters 3rd. These two items received poorer ranks in the other six Department Type Composites.

- The State Composite seemed to be significantly different from the other Department Types: States tended to give high priority to Helicopters and Other Aircraft.

- Mobile Communications/Command/Control Vehicles was ranked 2nd in the National Composite and in five of the seven Department Type Composites.

- The National Composite Ranking for the Vehicles list was

Rank	Equipment Item
1	Patrolcars
2	Mobile Communications/Command/Control Vehicles
3	Other Land Vehicles
4	Motocycles
5	Helicopters
6	Scooters
7	Boats and Other Watercraft
8	Other Aircraft

E. Protective Equipment and Clothing (pp. 30--34)

- Police Uniform was the 1st of 11 items in 18 of the 19 Protective Equipment and Clothing Composites.

- In the State Composite, Riot Helmet was ranked number 1. In all other Department Types, Riot Helmet was ranked 2nd.

- Bomb Disposal Device was ranked 3rd in the Fifty Largest City Composite and 4th in the City With 50+ Officers Composite. It was ranked poorly in all other Department Type Composites.

- Hand-held Shields, Vehicle Armor, and Crash Helmets tended to be in the three lowest priority positions (9th, 10th, and 11th).

- The National Composite Ranking for the Protective Equipment and Clothing list was

Rank	Equipment Item
1	Police Uniform
2	Riot Helmets
3	Gas Masks
4	Rainwear
5	Body Armor
6	Bomb Disposal Devices
7	Ballistic Helmets
8	High Visibility Clothing or Patches
9	Crash Helmets
10	Vehicle Armor
11	Hand-held Shields

F. Lethal Weapons (pp. 37-41)

- 40% of the departments ranked the .38 Special Revolver number 1. It was 1st in 17 of the 19 Lethal Weapons Composites.
- The .357 Magnum Revolver was ranked number 1 in the State Composite.
- Regular Service Ammunition was 2nd in most of the Composites. However, it was in 4th place in the unweighted National Composite.
- The Shotgun was clearly the highest priority shoulder weapon.
- The National Composite Ranking for the Lethal Weapons list was

Rank	Equipment Item
1	.38 Special Revolver
2	Regular Service Ammunition for Handguns
3	Shotgun
4	.357 Magnum Revolver
5	Frangible Bullets
6	Rifle
7	Regular Service Ammunition for Shoulder Weapons
8	High-drag Bullets
9	9 mm Pistol
10	Carbine
11	Armor-piercing Bullets
12	.45 Automatic

G. Non-Lethal Weapons (pp. 41-44)

- Many departments said the items on this list did not apply to them, and many said they were unfamiliar with the items.
- No single item on this list dominated the top priority position in the Composites.
- Six of the 11 items (Blackjacks/Saps, Batons/BillyClubs/Nightsticks, and the 4 Tear Gas items) tended to be ranked in the top 5 or 6 positions.

- The National Composite Ranking for the Non-Lethal Weapons list was

Rank	Equipment Item
1	Batons/BillyClubs/Nightsticks
2	Tear Gas Dispensers
3	Tear Gas
4	Gas Grenades and Cannisters
5	BlackJacks/Saps
6	Tear Gas Generators
7	Tranquilizer Dart Guns
8	Water Cannon
9	Dye-marker Guns
10	Pellet Guns
11	Electric Shockers

H. Emergency Warning and Rescue Equipment (pp. 52-56)

- The Combined Siren/Light/Loudspeaker (CS/L/L) was ranked number 1 in 17 of the 19 Composites in this category and by 38% of the departments.

- Furthermore, two of the components of the CS/L/L system, Flashing Lights and Sirens, were ranked high in the National Composite: Flashing Lights was 2nd and Sirens was 4th.

- Rescue Equipment, 3rd in the National and City Composites, was also given relatively high ranks by Department Type and Regional Composites.

- The National Composite Ranking for the Emergency Warning and Rescue Equipment list was

Rank	Equipment Item
1	Combined Siren/Light/Loudspeaker System
2	Flashing Lights
3	Rescue Equipment
4	Sirens
5	First Aid Kits
6	Spot Lights
7	Loudspeakers
8	Fire Extinguishers
9	Flares
10	Flood Lights
11	Reflectors

I. Detection Systems (pp. 61-64)

- In general, the 11 items in this list fell into two groups reflecting higher and lower priorities for standards.

- 5 of the items (Field Narcotic Screening Kits, Quantitative Breath-Alcohol Screening Device, Pre-arrest Breath-alcohol Screening Device, Narcotic and Explosive Detectors, and Fingerprint Kits) were ranked in one of the top five positions by more than two-thirds of the respondents.

- This general pattern was found in all of the Composites except for the Fifty Largest City Composite in which Walk Through and Hand-held Metal Weapons Detectors were given higher priorities.

- The National Composite for Detection Systems (with the dotted line marking the general division in priorities) was

Rank	Equipment Item
1	Fingerprint Kits
2	Field Narcotic Screening Kits
3	Narcotic and Explosive Detectors
4	Quantitative Breath-Alcohol Device
5	Pre-arrest Breath-Alcohol Screening Device
6	Polygraph
7	Hand-held Metal Weapons Detectors
8	X-Ray Equipment Used by Bomb Squads
9	Walk-through Metal Weapons Detectors
10	Gas Chromatograph for Laboratory Use Only
11	Other Types of Weapons Detectors

- The only item consistently in a high priority position in all aggregates was Field Narcotic Screening Kits.

J. Surveillance and Security Equipment (pp. 57-61)

- The weighting scheme played a significant role in the Composite for this list.

- Smaller departments (in terms of numbers of officers) tended to give higher priorities to Alarm Displays in Department. Larger departments tended to give better rankings to Low Light Level Closed Circuit TV.

- State departments tended to give higher priority to Night Vision Scope Suitable for Rifles than any other Department Type.

- 41% of the respondents ranked Alarm Displays in Department number 1, although this item received only the 3rd rank in the National Composite.

- Hand-held Night Vision Equipment was the top ranked item in the Fifty Largest City Composite.

- The National Composite Ranking for the Surveillance and Security Equipment list was

Rank Unweighted	Rank Weighted	Equipment Item
5	1	Low-Light Level Closed Circuit TV
2	2	Hand-held Night Vision Equipment
1	3	Alarm Displays in Department
3	4	Still Camera Equipment for Night Vision Devices
8	5	Closed Circuit TV
6	6	Night Vision Scope Suitable for Rifles
7	7	Lenses for Night Vision Survwillance Equipment
4	8	General Purpose Locks
9	9	Special Locking Devices for Detention Centers

K. Building Systems (pp. 49-52)

- Police Station Design/Construction was ranked number 1 by 63% of the respondents. It was 1st in every Composite.

- Since each of the items in this list covered a broad range of equipment and/or facilities and since respondents may not have had the same things in mind when assigning ranks, the analysis of this list may not be as meaningful as the others.

- The National Composite Ranking for the Building Systems list was

Rank	Equipment Item
1	Police Station Design/Construction
2	Detention Center Design/Construction
3	Building Materials
4	Institutional Equipment
5	Institutional Furnishings

1.0 INTRODUCTION

1.1 Project Background

During the past several years, law enforcement agencies in the United States have become more aware of the importance of equipment in the performance of their duties. Much of their equipment had originally been designed for other uses and had to be modified. Other equipment items had to be used as given. No standards existed against which equipment performance could be measured nor were any standard test methods or procedures available. It has been difficult for agencies to compare the performance of equipment items. Recognizing this problem, in 1970, the Law Enforcement Assistance Administration (LEAA) of the Department of Justice began a concentrated program toward the improvement of law enforcement equipment.

As the first step in its Equipment Systems Improvement Program (ESIP), LEAA, in cooperation with the Department of Commerce, established a Law Enforcement Standards Laboratory (LESL) at the National Bureau of Standards (NBS). The broad goal of LESL is to recommend performance standards which can be promulgated by LEAA as voluntary guidelines for the selection of equipment by law enforcement agencies. Additionally, LESL is developing standard test methods and procedures, so that the relative performance of similar items may be evaluated by departments themselves.

In order to provide equipment user information for the ESIP program, in 1971 the National Institute of Law Enforcement and Criminal Justice (NILECJ) of LEAA asked the Behavioral Sciences Group of the Technical

Analysis Division at NBS to gather information from law enforcement agencies about their specialized equipment needs and problems. Although face-to-face interviews with a large sample of representatives from law enforcement agencies would have been desirable, time and manpower constraints led to the development of a nationwide mail sample survey having two general objectives: (1) To assist NILECJ in the establishment of priorities for LESL's standards development activities; and (2) to obtain detailed information about certain broad equipment categories so that research to develop standards in these areas could begin.

The present report deals with the first general objective stated, and the associated survey questionnaire will be referred to as the Equipment Priorities Questionnaire (EPQ). A copy of the EPQ may be found in Appendix A. The second objective is accomplished in the reports on Alarms, Security and Surveillance Systems; Communications Equipment and Supplies; Handguns and Handgun Ammunition; Sirens and Emergency Warning Lights; Body Armor and Confiscated Weapons; and Patrolcars. The six questionnaires associated with these specific equipment areas will be referred to as Detailed Questionnaires (DQs). A complete listing of these reports may be found on the inside front cover of this report.

1.2 Sample Design

Although the objective of ESIP is to serve all types of law enforcement agencies, this particular study was purposefully limited to police departments as the largest single group of law enforcement agencies with identifiable equipment needs. No attempt was made to survey correctional

institutions, courts, forensic laboratories, or special police agencies such as park police, harbor patrols or university police. The computerized directory of approximately 14,000 police agencies, compiled and maintained by LEAA's Statistics Division, provided the population from which the sample was drawn. Care was taken to exclude the double listings that existed for some agencies. Details of the selection process are given in Appendix B.

The final list of 12,842 departments was cross-stratified by LEAA geographic region, and department type by the mutual agreement of NBS and NILECJ. The assignment of states to regions and the seven department types chosen for study are shown in Table 1.2-1.

Table 1.2-1. Stratification Categories

DEPARTMENT TYPES	LEAA GEOGRAPHIC REGIONS
State Police	1 = Conn., Maine, Mass., N.H., R.I., Ver.
County Police & Sheriffs	2 = N.J., N.Y.
City with 1-9 Officers	3 = Del., Md., Penn., Va., W.Va., D.C.
City with 10-49 Officers	4 = Ala., Fla., Ga., Ky., Miss., N.C., S.C., Tenn.
City with 50 or more Officers*	5 = Ill., Ind., Mich., Ohio, Wis., Minn.
The 50 Largest U.S. Cities**	6 = Ark., La., N.M., Okla., Tex.
Township Departments	7 = Iowa, Kan., Mo., Neb.
	8 = Colo., Mont., N.D., S.D., Utah, Wyo.
	9 = Ariz., Calif., Nev., Hawaii
	10 = Alas., Idaho, Ore., Wash.

* Excluding the 50 largest U.S. cities.
** By population, U.S. 1970 census.

The breakdown of the population of police departments by cross-strata is exhibited in Table 1.2-2. As can be seen from the table, there were no

Table 1.2-2 Number of Police Departments By Region and Type

DEPARTMENT TYPE	LEAA REGION 1	2	3	4	5	6	7	8	9	10	TOTAL
State	6	2	5	8	6	5	4	6	4	4	50*
County	66	84	257	764	536	506	413	288	103	120	3137
City (1-9 Officers)	27	348	713	979	1470	703	611	283	135	217	5486
City (10-49 Officers)	40	237	166	344	508	230	142	71	168	79	1985
City (50 or More Officers)	60	64	36	83	119	46	23	19	87	17	554
50 Largest Cities	1	4	5	8	10	8	3	1	8	2	50
Township	629	349	362	-	234	-	-	-	-	-	1574
TOTAL	829	1088	1544	2186	2883	1498	1196	668	505	439	12,836

* Questionnaires were actually sent to 56 State Police departments since there were 6 State Departments which listed two police agencies without reference to a common central agency. However, only one set of questionnaires was accepted from each of these 6 agencies.

Townships in Regions 4,6,7,8,9 and 10. Almost 63% of the departments were City police, 43% having 1-9 full-time officers. County departments comprised about 24% of the population. By Region, the smallest (Region 10) contained only 3.4% of the police departments, while Region 5, the largest, had 22.5%. The variation in the number of departments in a cell (Region/Department Type combination) was even greater than that across the strata, i.e. the number of departments in each cell ranged from 0 to 1470.

The considerations discussed in the previous paragraph led to the sampling plan discussed briefly below, and in detail in Appendix B. All of the State departments and the Fifty Largest City departments were included in the sample and were asked to complete all six DQs, i.e. they were sent the entire package of seven questionnaires. For the remaining cells the variation in cell size presented a problem: If the same fraction of the entire population were to be selected from the members of each cell, a constant sampling fraction large enough to allow a sufficient number of sample units (police departments) in small cells would yield an unmanageably large total sample; on the other hand, a constant sampling fraction small enough to make the total sample manageable would yield too few sample units in small cells. To solve this problem, a fixed sample of 30 police departments/cell was chosen, wherever possible, resulting in a different sampling fraction for each cell. A fixed sample size of thirty departments/cell was chosen to facilitate the equitable distribution of the six DQs. This plan resulted in sending the EPQ to 1392 departments, and each DQ to approximately 530 departments. Table 1.2-3 presents the total EPQ sample which represents 10.8% of the total population of police departments under consideration.

Table 1.2.-3 Sample of Police Departments by Region and Type

DEPARTMENT TYPE	REGION 1	2	3	4	5	6	7	8	9	10	TOTAL
State	6	2	5	9	7	6	5	7	5	4	50*
County	30	30	30	30	30	30	30	30	30	30	300
City (1-9 officers)	27	30	30	30	30	30	30	30	30	30	297
City (10-49 officers)	30	30	30	30	30	30	30	30	30	30	300
City (50 or more officers)	30	30	30	30	30	30	23	19	30	17	269
50 largest cities	1	4	5	8	10	8	3	1	8	2	50
Township	30	30	30		30						120
Total	154	156	160	137	167	134	121	117	133	113	1386

*Questionnaires were actually sent to 56 State Police departments since there were 6 State Departments which listed two police agencies without reference to a common central agency. However, only one set of questionnaires was accepted from each of these 6 agencies.

Comparison of Tables 1.2-2 and 1.2-3 shows the effect of employing a constant sized sample/cell. The cell having the smallest sampling fraction is Region 5, City (1-9 Officers), with just over 2% sampled, whereas some cells are sampled 100%. Furthermore, it should be noted that about 5.5% of Cities With 1-9 Officers are in the sample, compared to 100% of the Fifty Largest Cities. The fractions sampled by region show somewhat more stability, lying between 6% and 25%.

The departments were selected randomly within each cell, from the total cell population, for EPQ mailing. The DQs were also randomly distributed within each cell, each department (other than the States and the Fifty Largest Cities) receiving two DQs. Thus, in cells having 30 sample units, each DQ was mailed to 10 departments; cells having fewer sample units were allocated correspondingly fewer of each DQ (see Appendix B).

Once the sample was selected, each sample unit was assigned a unique seven-digit identification number, coding region, type, and questionnaire assignment.

1.3 Questionnaire Administration

From the beginning of the project, it was evident that straingent control would be required in administering the questionnaires to ensure a high rate of response. Computer-stored daily status records were input via a teletypewriter terminal for each sample department. In general the following procedure was used:

(a) Each department in the sample was mailed a letter, signed by the director of NILECJ, addressed to the head of the

department. This letter introduced the survey and requested cooperation.

(b) About one week later, the questionnaire packages were mailed.

(c) Departments not returning the questionnaires within a month were identified by the computer and were sent a postcard requesting information as to the status of the questionnaires. Departments not receiving the questionnaire package were sent another; those not returning the postcard were placed on a list for telephone follow-up.

(d) About a month and a half later, departments with which no contact had been made were called by telephone.

(e) Returned questionnaires were reviewed for completeness and either coded for keypunching or filed for telephone call-back to supply missing data or to clear up ambiguities.

Considerable effort was expended to ensure a high rate of response, and this effort was rewarded with an 83% response for the EPQ, and between 81% and 85% for each DQ.

The distribution of respondents (departments which returned usable EPQ's) is exhibited in Table 1.3-1. Comparing this table with Table 1.2-3 shows that greatest response rate was from the States and larger cities (over 90%), while Counties and Townships had the poorest response rates (under 75%). This would seem to be partly explained by the fact that the larger departments use more equipment than do smaller departments and therefore have a greater interest in developing standards. An inspection of the average annual equipment budget for the various department types supports

Table 1.3-1. Number of Respondents to the Equipment Priorities Questionnaire by Region and Type.

DEPARTMENT TYPE	LEAA REGION 1	2	3	4	5	6	7	8	9	10	TOTAL	Percent of Sample
State	6	2	5	8	6	5	3	6	3	3	47	94%
County	17	24	19	18	25	19	25	25	29	24	225	75%
City (1-9 Officers)	21	27	26	28	25	19	23	24	23	22	238	80%
City (10-49 Officers)	25	26	24	22	29	25	27	29	27	28	262	87%
City (50 or more officers)	27	23	29	30	26	29	19	18	27	16	244	91%
50 largest cities	1	3	4	7	8	8	3	1	8	2	45	90%
Township	19	24	21	0	17	0	0	0	0	0	81	67%
Total	116	129	128	113	136	105	100	103	117	95	1142	83%
Percent of Sample	75%	83%	80%	82%	81%	78%	83%	88%	88%	84%	83%	

this hypothesis. Additionally, telephone contacts with non-respondents revealed that many small departments considered themselves to be understaffed and thus unable to answer the questionnaires.

A more detailed description of the EPQ administration may be found in Appendix C.

1.4 Development and Design of the EPQ

The survey plan and questionnaire design evolved over a 12-month period. During this time the survey team consulted at length with NILECJ equipment experts, LESL program managers, and equipment manufacturers. In addition, the officers and administrators of about 40 police departments served as consultants and/or as respondents for pretests of various versions of the questionnaires.

The EPQ in its final form is reproduced in Appendix A. Each respondent was asked to rank-order the items on each of ten lists: One list contained nine general equipment categories; the other nine lists contained items within each category. There were 87 items (or item/systems) in the nine category lists, the longest list (Lethal Weapons) having 12 items and the shortest (Building Systems) having 5 items.

The criterion for rank-ordering was the need for standards of entries in the list. Considerable care was taken to render the phrase "in need of standards" and its negative as clearly and concisely as possible (see page A-4 of the EPQ, Appendix A). Emphasis was given to the request that rankings reflect the needs of the respondent's department, not what the respondent thought were general police department needs. This distinction is important. For example, a respondent may have felt

that standards development for sophisticated communications equipment was important, but he may have had no need for such equipment himself and was not planning to buy any. Therefore, these items should have been ranked poorly by him.

The nine categories of equipment were established on the basis of discussions with LESL, NILECJ, and police departments. Computers and computer related equipment were purposefully excluded from the survey. Other ways to group police equipment (e.g. by cost) were clearly possible, but grouping by type seemed to offer the most convenient and logical form. Furthermore, this type of categorization presumably minimized the number of "apples/oranges" comparisons.

One of the more difficult tasks in the preparation of the lists was that of limiting the number of items in each list. Ranking a number (N) of items involves assigning the integers 1 through N (in some permutation) to each item. (Instructions for this survey asked that rank 1 be assigned to the highest priority item, rank 2 to the next higher priority item, etc., and rank N to the lowest priority item.) In a task of this kind, if N is too large, a respondent may not be able to make rational comparisons and may be more prone to making errors, e.g. assigning the same rank to two different items. Therefore, decisions were made by the study group (with the advice of LESL, NILECH, and the pretest departments) to exclude those items least likely to be found in the field. However, space was provided at the bottom of each list for the respondent to "write-in" additional items or make comments. These additions were not ranked with the others but were recorded and are discussed in this report.

In addition to the nine category lists, the respondents were asked to rank the categories themselves and to check two of eight reasons for their choice of the top priority category.

Explicit instructions appeared on each page of the EPQ in an effort to minimize the number of misinterpretations and errors. Since it was learned through pretesting that many police departments receive more than ten questionnaires per month from universities and other research organizations, extra care was taken to obtain conscientious and thoughtful responses. Because it is likely that an item's position in a list may influence the ranking it receives, approximately half of the respondents were sent EPQs with lists in reverse order from those sent to the other half. Although no statistical tests were made, it is assumed that this procedure led to a cancelling of order effects, if any.

Other data describing the characteristics of the responding departments were requested in the EPQ. Among these were population served and physical size of the jurisdiction served; type of jurisdiction (as a check against the NILE-CJ data tape); number of full- and part-time officers (as an update to the original data tape); approximate total, equipment and personnel expenditures during 1971; and activities handled by the police department (e.g. Custody/Detention, Traffic Safety and Control).

1.5 An Overview of the EPQ Analysis

The analysis of the rankings performed for this study had two major objectives:

(a) To determine the level of agreement in rankings within various aggregates of respondents; and

(b) to establish "composite rankings"* for various aggregates of respondents.

In the following discussion of analytical techniques, no distinction is made between the nine category lists of items and the list of categories. The generic term for a list "item" or "category" is entry. Furthermore, since all ten lists were analyzed in the same way, the discussionof analytical techniques refers to "the list" instead of referencing a particular list.

1.5.1 Composite Rankings

The final form of the EPQ asked respondents to rank each entry in the lists. Both rating and partial ranking techniques were considered as alternatives to the ranking method selected and were not adopted. A rationale for the choice of the present ranking scheme over these alternative methodologies is presented in Appendix D.

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* The term "composite ranking" is used to dispel any notion that there is some underlying "true" ranking for the aggregate under consideration, as there exists no evidence to support such an hypothesis, even though the level of agreement is high, as indicated by the appropriate statistical tests.

The rankings from each department were aggregated into composite rankings.* Each composite ranking was obtained by ordering "scores" based on the rankings given by individual departments within the entire aggregate under consideration. That is, a "score" was calculated for each entry on the list, based on the ranks assigned by departments in the group of interest. The score for an entry, then, was:

$$\sum W_K^{2\,-r_K}$$

Where the summation was taken over all respondents (K) in the aggregate of interest; r was the rank given the entry by the respondent, and W was the weight associated with the respondent.

This method of aggregating ranked data yields a "composite ranking" influenced importantly by two factors. Firstly, the exponential formula ** employed has the property of assigning most importance to an entry ranked number one by many respondents and exponentially less importance to the poorer rankings given that entry. For example, the assignment of an entry to third place by eight departments would be equivalent to the assignment of that same entry to first place by one department. This procedure gives considerable emphasis, then, to positive statements (i.e. ranking an entry number one) about "needs for standards" and very little emphasis to expressions of either indifference or lack of need for standards.

* The aggregates of respondints considered are Regions, Department Types, all Cities, and the nation (i.e., for each list, there are ten composite rankings for the ten LEAA Regions, seven composite rankings for the seven Department Types, a composite ranking for the Cities and a national composite ranking.) The Cities composite ranking is based on data from the responding departments in the four City Department Types: Fifty Largest Cities, Cities (50+), Cities (10-49), and Cities (1-9).

** This formula was supplied by Mr. Marc Nerenstone of NILECJ, Department of Justice.

Secondly, the weighting factor multiples the department's vote by the number of full-time sworn officers in that department, and in that sense, gives each officer one vote. Other means of weighting the responses were considered and rejected: Developmental work indicated that the number of officers in the responding department was generally the best single index of that department's use of equipment. Composite rankings assuming equal weights for all responding departments (W = 1) were calculated as well, and are used in Section 3.0 of this report to highlight the effects of the present weighting scheme. In addition, details of the several formula/weight combinations considered during the course of the analysis are discussed in Appendix D.

1.5.2 Level of Agreement

The analysis included the calculation of a statistic (Coefficient of Concordance) which would indicate whether or not certain groups of departments tended to assign similar ranks to an entry. (e.g. whether there was agreement among the seven Department Types or among the ten Regions in their rankings of the entries.) This statistic was calculated for the departments within each Department Type, and within each Region. In addition it was calculated among Regions (with all departments in a LEAA Region regarded as a single "respondent") and among Department Types (with all departments in a particular Department Type regarded as a single "respondent"). Note that when calculating the statistic among Department Types or Regions, that it is possible for the level of agreement among the groups to be high while the level of agreement between any two of those groups is low, and vice versa.

One additional statistical test was made regarding the rankings. This test identifies entries ranked consistently high or low (based upon the simple rank sum) by respondents and was applied to the same aggregates of respondents as were tested for level of agreement. (See Appendix D)

Complete tables, including simple relative frequency counts (or distributions) of the ranks, have been tabulated and appear in Appendix E.

2.0 CHARACTERISTICS OF RESPONDING DEPARTMENTS

Equipment needs of police departments are clearly a function of their activities as evidenced by the responses to the check-list of 30 typical police department activities that was included in the EPQ. Results are tabulated by Department Type in Table 2.0-1.

The activities most frequently checked were (1) Serving Traffic and Criminal Warrants (88%); (2) Traffic Safety and Traffic Control (87%); and (3) Intra-departmental Communications (87%). All 45 of the Fifty Largest Cities responding indicated that their departments provided In-house Training and performed Criminal Investigations. These compare to 68% and 86%, respectively, of all respondents. Although only 13% of the responding departments overall had Crime Laboratories, 73% of the Fifty Largest City Departments had them, as did 55% of the State Departments. The activity appearing to be most constant for all Department Types was that of providing Emergency Aid and Rescue, ranging from 60% (Cities with 50+ Officers) to 67% (County Departments).

Table 2.0-1. Percent of Respondents Having Each Activity, By Department Type

DESCRIPTION OF ACTIVITY:	State %	County %	City (1-9) %	City (10-49) %	City (50+) %	50 Largest %	Township %	Total %
Serve Traffic and Criminal Warrants	70	89	84	89	94	87	93	88
Traffic Safety and Traffic Control	92	56	94	96	96	98	94	87
Communications for Own Department	94	86	76	95	94	96	70	87
Criminal Investigation	66	86	71	95	97	100	79	86
Police Training for Own Department	98	55	48	77	87	100	42	68
Custody/Detention-Less than 1 Day	15	79	51	73	72	80	43	65
Breath-Alcohol Test	89	46	47	72	83	91	49	64
Emergency Aid and Rescue	62	67	62	63	60	67	62	63
Public Building Protection	15	40	63	60	58	44	68	54
Service Function	30	30	48	55	60	60	42	48
Animal Control (Dog Catcher)	0	26	58	63	42	16	37	44
Highway Patrol	96	38	48	36	31	24	88	43
Maintenance of Police Buildings	51	36	34	41	48	47	30	40
Custody/Detention-Less than 1 Week	0	73	20	36	46	49	2	38
Communications for Other Agency	66	56	29	40	24	24	14	36
Serve Civil Process	6	88	29	15	9	11	31	32
Police Training for Other Agency	77	22	2	11	42	84	10	24
Custody/Detention-One Year or Less	0	78	7	10	14	16	1	22
Underwater Recovery	34	42	6	11	16	42	9	19
Bomb Disposal	45	20	5	11	23	82	1	17
Polygraph	62	8	1	5	36	90	2	17
Vehicle Inspection	55	16	21	14	14	11	9	17
Crime Laboratory	55	6	2	7	20	73	1	13
Narcotics Laboratory Analysis	43	9	2	8	12	62	1	11
Harbor Patrol	6	14	3	2	9	31	1	7
Lab Analysis for Blood Alcohol	34	7	0	1	7	53	2	7
Other	2	7	4	7	5	2	5	6
Coroner	0	16	2	3	1	0	2	5
Tests for Drivers License	34	4	4	2	0	2	0	3
Custody/Detention/More than 1 Year	0	13	0	0	1	2	1	3

Other activities, not on the list but written in, included meter parking and maintenance; crossing guards; court duties; river, lake and park patrol; licensing and license regulation; juvenile detention; vehicle accident investigation; and local zoning and ordinance enforcement.

Table 2.0-2 shows a summary of the descriptive data obtained from the responding departments. As can be seen from the column for Annual Equipment Budget, there was a wide range of expenditures among the different Department Types, from a mean of about $10 thousand for Cities with 1-9 Officers to almost $2.6 million for the Fifty Largest Cities. The largest individual equipment budget was $40 million, occurring in one of the Fifty Largest Cities. Overall, Equipment Budgets represented somewhat over 10% of the total annual budgets reported.

The mean Number of Part-time Officers was based on those respondents having Part-time Officers in their departments. Of the 45 responding from the Fifty Largest Cities, only six had Part-time Officers, including one city which had nearly 6000. Thus, the mean value of 1115 for this Department Type is somewhat misleading. It should be noted that the category "Part-time Officers" included officers described as auxiliary, volunteer, reserve, school-crossing guard, dispatcher, summer, special agent, traffic supervisor, posse, and cadet. All of these classifications were counted in the Part-time Officer category since it has different meanings for different departments.

Variations in these descriptive averages by LEAA Region (see Table 2.0-3) were considerably smaller than variations by Department Type.

Table 2.0-2. Descriptive Data by Department Type (Means)

Department Type	Area (Sq. Miles)	Population	Number of Full-Time Officers	Number of Part-Time Officers	Annual Total Budget	Annual Equipment Budget	Annual Personnel Budget
50 Largest	187	851,342	2,491	1,115	$43,268,865	$2,669,920	$34,712,818
State	62,580	3,936,410	889	18	$16,377,358	$2,304,339	$12,020,572
County	1,518	130,254	60	25	$ 1,089,919	$ 58,539	$ 859,984
City (50+)	31	83,344	132	26	$ 1,733,340	$ 173,099	$ 1,407,177
City (10-49)	12	15,849	22	9	$ 257,927	$ 24,362	$ 206,187
Township	28	13,228	14	8	$ 175,654	$ 20,854	$ 141,675
City (1-9)	9	5,038	8	5	$ 82,381	$ 9,764	$ 60,061

Table 2.0-3. Descriptive Data by LEAA Region (Means)

LEAA Region	Area (Sq. Miles)	Population	Number of Full-Time Officers	Number of Part-Time Officers	Annual Total Budget	Annual Equipment Budget	Annual Personnel Budget
1	750	158,112	96	18	$ 1,360,155	$ 135,130	$ 979,911
2	648	240,781	365	97	$ 7,148,315	$ 148,172	$ 5,265,546
3	1,096	245,733	216	7	$ 3,412,567	$ 435,153	$ 2,879,293
4	3,691	340,996	151	11	$ 2,318,382	$ 248,600	$ 1,767,292
5	2,652	448,174	283	8	$ 4,916,607	$ 431,478	$ 3,879,374
6	5,738	271,386	160	17	$ 2,193,823	$ 160,363	$ 1,709,910
7	2,379	112,094	84	9	$ 1,220,385	$ 121,001	$ 983,696
8	6,346	83,023	54	9	$ 728,549	$ 77,081	$ 568,463
9	4,218	372,094	281	46	$ 5,743,553	$ 728,801	$ 4,528,692
10	3,580	104,877	69	9	$ 1,253,894	$ 82,198	$ 1,011,604

Regions 1 and 8 had smaller budgets than the others, primarily because each had only one of the Fifty Largest Cities.

It was mentioned previously that the number of officers cited by respondents could serve as a cross-check and update of the original data tape from LEAA. Table 2.0-4 indicates changes in the original classification. As an example of how this table can be read, 33 of the city departments having 1-9 officers according to the LEAA tape in fact reported 10-49 officers. The relative symmetry of the table matrix indicates that changes in numbers of officers occurred approximately equally in the positive and negative directions.

Table 2.0-4 Numbers of Officers in City Departments

DEPARTMENT TYPE: (From LEAA Tape)	ACTUAL NUMBER OF OFFICERS REPORTED FROM THE SURVEY:		
	1-9	10-49	50+
City (1-9 Officers)	195	33	4
City (10-49 Officers)	28	230	4
City (50 or more Officers)	1	7	236

Eighteen different titles for respondents were coded. Slightly over 37% of the EPQs were completed by department chiefs. The EPQ was more likely to be completed by department chiefs in the smaller cities and Townships. Only 4% of the EPQs sent to the Fifty Largest Cities were filled in by the chief; over 22% of the respondents from the Fifty Largest Cities were non-uniformed personnel (planning staff, administrators, etc.). Sheriffs, Deputies and Under-Sheriffs comprised over 78% of the County respondents. For cities other than the Fifty Largest, chiefs, Captains and Lieutenants were the primary respondents. State departments

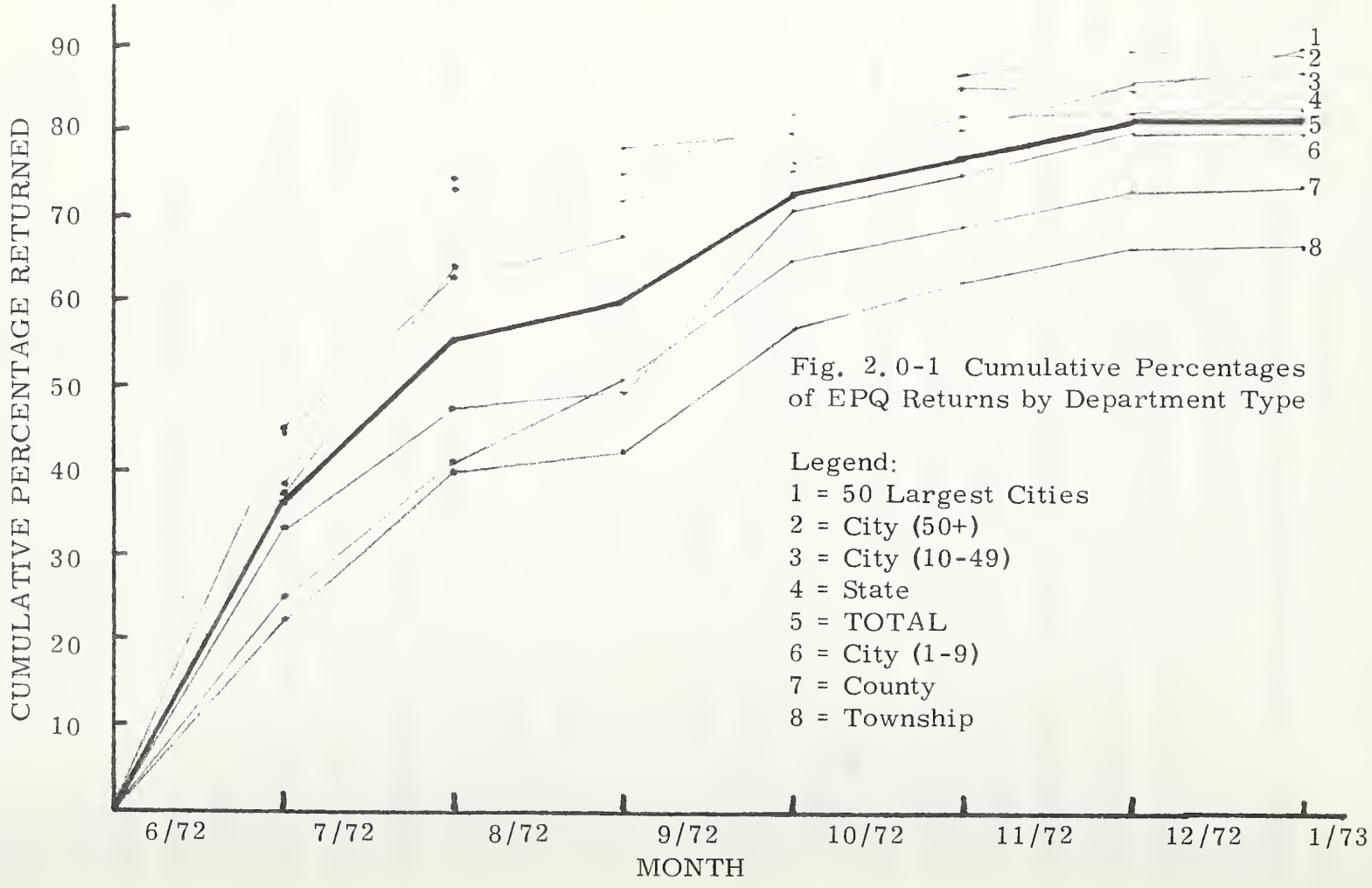
provided a fairly even distribution of responding personnel, including Captains, Majors, Lieutenants, Sergeants and non-uniformed personnel. Rates of response by department type are exhibited in Figure 2.0-5. (p. 22). Generally, the two months having the highest rates of return were June (after the initial mailing) and August (after the follow-up post card). State departments and the larger Cities had higher than average returns, while the small cities (1-9 officers), Counties and Townships indicated the lowest. It is interesting to note that the Fifty Largest Cities had their highest return rate during the month of July, prior to the post card mailing, suggesting possibly a longer time period to complete the EPQ because of the six DQs they received. A similar observation may be made for State Departments. (See the further discussion of this topic in Appendix C.)

3.0 ANALYSIS OF RANKINGS

This section presents a discussion of the results of the analyses of the responses to the EPQ. A subsection is provided for the analysis of each of the ten lists in the EPQ. Note again that composite rankings were based on a weighted exponential formula*, the weights being proportional to the number of full-time officers in the responding department. It should be further emphasized that these analyses of rankings provide only one of many inputs to the decision-making process by which priorities for developing standards for police equipment will be determined by NILECJ.

* See Section 1.5.1 or Appendix D.

Figure 2.0-5. Cumulative Percentages of EPQ Returns by Month and Department Type.



The reader should also be cautioned to treat individual lists separately. For example, there is no basis in the data for comparisons between the priorities from two different lists. The type of inference that one might be tempted to draw is that since Communications was ranked higher than Protective Equipment and Clothing, Mobile Transceivers (the top priority Communications item) should be ranked higher than Police Uniform (the top priority Protective Equipment and Clothing item). This conclusion would not be deducible from the data.

It is highly likely that many of the respondents ranked lists according to the criterion of importance to the police department, rather than that of need for standards development. Although the latter is in principal what was sought, it is fully appreciated that some respondents used the former in selecting ranks. This possible ambiguity in the interpretation of the criterion has not necessarily generated "contaminated" data. The imposition of a strict distinction between that which is important to departments (for which relatively little standards development would be needed) and that which departments rarely used (for which considerable standards development would be needed) contributed an additional dimension to the problem of setting priorities. Leaving this trade-off decision to individual respondents' rankings yielded data which more accurately reflected the overall priorities as individually perceived.

3.1 Rankings of Categories of Equipment

3.1.1 The Categories

Nine general equipment categories were selected for inclusion in the EPQ. It was assumed, based on discussions with law enforcement experts during the developmental phase of the study, that the categories were meaningful to the respondent departments and that they provided a logical structure for the wide variety of equipment used by those departments.

Of the nine categories in the list, two categories were said to be of high importance for standards by all classes of departments: Communications and Vehicles. Almost 39% of the respondents ranked Vehicles number one, and over 33% ranked Communications in that position. Communications and Vehicles were ranked among the top three (of nine categories) by over 78 and 74%, respectively, of the respondents. These same two categories received either the number one or two rank for each Department Type composite, except for the Fifty Largest Cities (for which Vehicles ranked third); for each Region composite except region 2 (for which Vehicles ranked third); for the City composite; and for the National composite. In the case of Region 2, one respondent, which had over two-thirds of the total weight for that Region (i.e. over two-thirds of the full-time officers in the Region were in one department), ranked Vehicles seventh. This partially accounts for the fact that Vehicles was third in the Region 2 composite ranking.

At the other extreme, Building Systems tended to receive low priority ranks from most of the aggregates of respondents. Only Cities With 10-49 Officers and Townships failed to arrive at a composite rank

of 8 or 9 (out of 9) for this category among the seven Department Types. Composites for six of the ten LEAA Regions ranked Building Systems eighth or ninth, and in both the City composite and National composite it was ninth. These results are not surprising in view of the fact that almost 40% of all respondents ranked Building Systems ninth; nearly 70% ranked that category seventh, eighth or ninth.

Relative frequency histograms for the number one-ranked category appear in Figure 3.1-1.

Figure 3.1-1. Percent Respondents Selecting Each Category as Number 1 In Importance.

EQUIPMENT CATEGORY:	RELATIVE FREQUENCY:	
Communications	33%	++++++++++++++++++++++++++++++++++
Vehicles	39	++
Protective Equipment	5	+++++
Lethal Weapons	6	++++++
Non-Lethal Weapons	2	++
Emergency Warning	4	++++
Detection Systems	3	+++
Security Equipment	4	++++
Building Systems	5	+++++

In the histogram, the categories have been ordered according to the National composite rankings, so that the extent to which the latter corresponds to a ranking based on the number of number-one ranks received may be seen from the overall trend of the histogram. Although the Vehicles category received more number one ranks than did Communications, the latter nevertheless was ranked number one in the National composite. The level of agreement <u>among</u> the seven Department Types, taking their ranking of all of the categories into consideration, was 100% as was the level of agreement <u>within</u> each Department Type. (See Appendix D for a discussion of

the meaning of the phrase "level of agreement." Basically if the "level of agreement" is 100%, there is a negligible probability that the observed similarity of rankings could have occurred by chance alone.)

Tables 3.1-2 through 3.1-5 show the National composite, the Cities composite, the Department Type composites, and the Regional composites, respectively. Regional differences appear to be somewhat less pronounced than Department Type differences. A closer examination, however, does reveal significant differences in pairs of Regional composites. For example, there was a relatively low level of agreement (82.1%) between Regions 2 and 6 ($t = 0.278$). Additionally, the level of agreement for the Fifty Largest City composite and the Cities composite was determined. In this case, the level of agreement was 99.98% ($t = 0.78$). This latter example illustrates the possible effect of the weights upon the determination of the composite rankings. That is, the largest weight carried by respondents in the Fifty Largest Cities might account for the high level of agreement between this aggregate and the aggregate of all cities. This hypothesis is supported by the fact that the levels of agreement of the Fifty Largest Cities with each of the other city department types were: 87% (Cities With 1-9 Officers); 46% (Cities With 10-49 Officers); and 96% (Cities With 50 or More Officers).

3.1.2 Reasons for Choosing Number One Category

Respondents were asked to indicate two of seven reasons for their selections of the category ranked number one. Table 3.1-6 indicates the distribution of their choices of reasons by top priority category and overall. Of the departments choosing Communication as the equipment area

Table 3.1-2 Composite Ranks for All Departments for Equipment Categories

CATEGORY	RANK
Communications Equipment and Supplies	1
Vehicles	2
Protective Equipment and Clothing	3
Weapons, Lethal and Related Ammunition	4
Weapons, Non-Lethal	5
Emergency Warning and Rescue Equipment	6
Detection Systems	7
Security Equipment	8
Building Systems	9

Table 3.1-3 Composite Ranks for All Cities for Equipment Categories

CATEGORY	RANK
Communications Equipment and Supplies	1
Vehicles	2
Protective Equipment and Clothing	3
Weapons, Lethal and Related Ammunition	5
Weapons, Non-Lethal	4
Emergency Warning and Rescue Equipment	7
Detection Systems	6
Security Equipment	8
Building Systems	9

Table 3.1-4 Department Type Composite Ranks for Equipment Categories

CATEGORY	DEPARTMENT TYPE						
	State	County	City (1-9)	City (10-49)	City (50+)	50 Largest	Township
Communications Equipment and Supplies	2	1	2	2	1	1	2
Vehicles	1	2	1	1	2	3	1
Protective Equipment and Clothing	5	4	5	7	3	2	5
Weapons, Lethal and Related Ammunition	4	3	3	3	4	7	3
Weapons, Non-Lethal	7	5	8	9	9	4	8
Emergency Warning and Rescue Equipment	3	7	4	4	6	8	4
Detection Systems	6	8	6	8	7	5	9
Security Equipment	8	6	7	6	5	6	7
Building Systems	9	9	9	5	8	9	6

Table 3.1-5 Region Composite for Equipment Categories

CATEGORY	LEAA REGION									
	1	2	3	4	5	6	7	8	9	10
Communications Equipment and Supplies	2	2	2	2	1	1	2	2	1	1
Vehicles	1	3	1	1	2	2	1	1	2	2
Protective Equipment and Clothing	4	1	3	4	6	6	6	4	3	4
Weapons, Lethal and Related Ammunition	3	7	5	3	4	3	3	5	4	6
Weapons, Non-Lethal	7	4	8	8	3	8	5	7	5	7
Emergency Warning and Rescue Equipment	6	6	4	5	8	4	4	3	7	5
Detection Systems	8	5	7	6	5	5	9	8	8	8
Security Equipment	9	8	9	7	7	9	7	9	6	3
Building Systems	5	9	6	9	9	7	8	6	9	9

Table 3.1-6. Reasons Given for Ranking Category Number 1, by Category.

CATEGORY	DEPTS. Giving That Cat. Number One Rank		Of Those Ranking That Category Number 1, REASON FOR NUMBER ONE RANK							
	No.	%	1 %	2 %	3 %	4 %	5 %	6 %	7 %	8 %
Vehicles	441	39	6	29	23	57	13	31	29	7
Communications Equipment and Supplies	375	33	18	42	21	26	16	32	34	7
Weapons, Lethal and Related Ammunition	65	6	22	38	14	14	17	34	37	8
Protective Equipment and Clothing	60	5	76	32	18	3	13	62	47	8
Building Systems	56	5	2	60	29	36	9	9	21	23
Security Equipment	50	4	6	56	18	16	10	24	52	4
Emergency Warning and Rescue Equipment	42	4	10	33	19	26	29	38	36	5
Detection Systems	33	3	12	46	21	9	6	27	46	15
Weapons, Non-Lethal	20	2	10	30	25	0	0	55	66	10
TOTAL			11	37	21	35	14	32	34	8

KEY TO REASONS

1. Most of this kind of equipment is now made by one or two firms. Standards might encourage others to start making it.
2. We plan to buy this kind of equipment in the near future. Standards would help us to select the best equipment at the least cost.
3. Much of the equipment we now have of this kind does not really meet our needs. Standards could be used to guide the manufacturers who develop equipment.
4. We now have maintenance and repair problems with much of this kind of equipment. Standards might solve these problems.
5. We buy equipment in this category from several different makers and find that parts and components cannot be interchanged among the different brands. Standards might help solve this problem.
6. When we buy equipment in this category, we must compare many different brands. If there were standards, we could stop a lot of this investigation and/or testing.
7. We are not able to test this type of equipment. If there were standards, we could use the results of tests made by the laboratory.
8. Other

which most required standards, 42% chose the response "We plan to buy this kind of equipment...Standards would help us to select..." Of the department choosing Vehicles as the equipment area which most required standards, 57% chose the response "We now have maintenance and repair problems...Standards might solve these problems." Four of the seven alternatives were chosen with almost equal frequency regardless of the equipment category marked number one. In addition to the two reasons mentioned above, the departments said that standards would help eliminate their current need to test and compare different brands of equipment and cited their inability to test equipment.

Nearly 100 comments were given by respondents regarding the reasons for why various equipment was in need of standards. Many of these suggested that respondents were thinking of the importance of equipment in running a police department, rather than of the need for setting equipment standards, although these two notions are obviously related. The absence of interchangeability of components and high costs of desired equipment were two comments made which may relate more directly to standards. Despite the fact that Building Systems ranked last in priority for standards development, several comments were made regarding lack of space, inadequacy of facilities and outdated equipment. Some of these problems, however, could probably be attributed to budget constraints rather than to lack of standards. It is interesting to note that 59% of those ranking Building Systems first indicated that their reason was the forthcoming purchase of such systems.

3.2 Protective Equipment and Clothing

Of the eleven items on the Protective Equipment & Clothing list, nearly 50% of all respondents indicated the Police Uniform as the item of protective

equipment and clothing most in need of standards. The National composite, Cities composite and all Regional composites had Police Uniform in first place. The State Department composite ranked Riot Helmets first and Police Uniform second. All other Department Type composites ranked Police Uniform first and Riot Helmets second.

The Fifty Largest Cities composite had Bomb Disposal Devices ranked third, and the composite for Cities With 50 or More Officers ranked this fourth. However, Bomb Disposal Devices were ranked poorly in all other Department Type composites. One obvious explanation for this is that the threat of bombs is greater in larger cities, perhaps because of greater concentrations of people and the sociological pressures existing in such high-density areas.

Hand-Held Shields, Vehicle Armor and Crash Helmets tended to occupy the three lowest priority positions (ranks 9, 10, 11) for most composites. One significant exception was Region 8 which ranked Crash Helmets with the second highest priority. This item was ranked eleventh (last) in Region 8 in the unweighted (equal weights) case, suggesting that perhaps a few respondents having many officers ranked Crash Helmets as high priority.

Although the level of agreement is 100% among the Department Types and among Regions, there are some pairs that have lower levels of agreement. These, however, all appear to be above the 90% level, i.e. there is certainly not much conflict among composite rankings. Tables 3.2-1 through 3.2-4 show composite rankings for the several aggregates considered.

Among the additional items listed, although by less than 9 departments each, were specific uniform and accessory clothing items; equipment to.

Table 3.2-1 Composite Ranks for All Departments for Protective Equipment and Clothing

CATEGORY ITEM	RANK
Police Uniform	1
Riot Helmets	2
Gas Masks	3
Rainwear	4
Body Armor	5
Bomb Disposal Devices	6
Ballistic Helmets	7
High Visibility Clothing or Patches	8
Crash Helmets	9
Vehicle Armor	10
Hand Held Shields	11

Table 3.2-2 Composite Ranks for All Cities for Protective Equipment and Clothing

CATEGORY ITEM	RANK
Police Uniform	1
Riot Helmets	2
Gas Masks	5
Rainwear	6
Body Armor	4
Bomb Disposal Devices	3
Ballistic Helmets	7
High Visibility Clothing or Patches	10
Crash Helmets	8
Vehicle Armor	9
Hand Held Shields	11

Table 3.2-3 Department Type Composite Ranks for Protective Equipment and Clothing

CATEGORY ITEM	DEPARTMENT TYPE						
	State	County	City (1-9 Officers)	City (10-49 Officers)	City (50 or more Officers)	50 Largest Cities	Township
Police Uniform	2	1	1	1	1	1	1
Riot Helmets	1	2	2	2	2	2	2
Gas Masks	3	5	5	4	5	5	4
Rainwear	4	3	3	3	6	8	3
Body Armor	6	6	7	6	3	4	7
Bomb Disposal Devices	8	7	8	8	4	3	11
Ballistic Helmets	7	9	6	5	7	7	5
High Visibility Clothing or Patches	5	4	4	7	11	10	6
Crash Helmets	9	8	9	10	8	6	10
Vehicle Armor	11	10	10	9	9	9	8
Hand Held Shields	10	11	11	11	10	11	9

Table 3.2-4 Region Composite Ranks for Protective Equipment and Clothing

CATEGORY ITEM	LEAA REGION									
	1	2	3	4	5	6	7	8	9	10
Police Uniform	1	1	1	1	1	1	1	1	1	1
Riot Helmets	4	2	2	3	2	2	2	3	2	5
Gas Masks	2	3	7	6	5	3	8	4	5	7
Rainwear	3	6	3	2	7	6	3	6	3	4
Body Armor	6	5	6	4	3	7	5	8	4	2
Bomb Disposal Devices	5	4	4	8	4	4	6	7	8	3
Ballistic Helmets	7	7	8	5	9	5	7	9	7	6
High Visibility Clothing or Patches	9	9	5	10	6	9	4	5	9	9
Crash Helmets	10	8	10	9	8	8	9	2	6	8
Vehicle Armor	11	11	9	7	10	11	10	11	10	10
Hand Held Shields	8	10	11	11	11	10	11	10	11	11

protect the hands and feet; face shields; in custody restraints; tamper-proof identification cards; and waterproof shoes.

3.3 Communications Equipment and Supplies

This category of equipment was ranked number one in the National composite. (See Section 3.1 above.) Of the nine items of communications equipment listed, the three items basic to most communications systems predominated: Mobile Transceiver (National composite - number 1 rank); Base Radio Transceiver (National composite - number 2 rank); and Hand-Held Transceiver (National composite - number 3 rank). These three items appeared in the top three ranks in six of the seven Department Type composites, in eight of the 10 Regional composites; in the City composite and in the National composite. In the exceptional cases, the worst rank received by any of the three was rank 5. Mobile Transceivers were ranked 1, 2 or 3 by 67% of all respondents; Base Radio Transceiver and Hand-Held Transceiver by 56% and 62%, respectively.

Tables 3.3-1 through 3.3-4 present the various composites. Tables 3.3-3 and 3.3-4 show that the levels of agreement among all Department Types and among all Regions were high; in fact, calculated to be 100%. Additionally, the level of agreement within each Department Type and within each Region was also 100 percent.

Several departments commented about their communication equipment: on the general importance of communications equipment to the police function; that their communications systems were outdated and that they were planning to buy new equipment; that an improved scrambler system was needed ; and that their spectrum allocation was insufficient. Twenty-five respondents

Table 3.3-1 Composite Ranks for All Departments for Communications Equipment and Supplies

CATEGORY ITEM	RANK
Mobile Transceivers	1
Base Radio Receiver	2
Hand-Held Transceivers	3
Digital Data Communications	4
Scramblers	5
Car Locaters	6
Repeater Transceivers	7
Tele-Printer Communications	8
Helmet with Built-in Transceiving Capacity	9

Table 3.3-2 Composite Ranks for All Cities for Communications Equipment and Supplies

CATEGORY ITEM	RANK
Mobile Transceivers	1
Base Radio Transceiver	2
Hand-Held Transceivers	3
Digital Data Communications	5
Scramblers	4
Car Locaters	6
Repeater Transceivers	8
Tele-Printer Communications	7
Helmet with Built-in Transceiving Capacity	9

Table 3.3-3 Department Type Composite Ranks for Communications Equipment and Supplies

CATEGORY ITEM	DEPARTMENT TYPE						
	State	County	City (1-9 Officers)	City (10-49 Officers)	City (50 or More Officers	50 Largest Cities	Township
Mobile Transceivers	1	3	2	2	3	1	1
Base Radio Transceiver	2	5	1	1	2	2	2
Hand-Held Transceivers	3	1	3	3	1	3	3
Digital Data Communications	5	2	9	8	7	4	8
Scramblers	7	4	4	4	4	8	4
Car Locaters	6	6	7	7	5	5	7
Repeater Transceivers	4	8	6	6	6	7	6
Tele-Printer Communications	8	7	5	5	8	6	5
Helmet with Built-in Transceiving Capacity	9	9	8	9	9	9	9

Table 3.3-4 Region Composite Ranks for Communications Equipment and Supplies

CATEGORY ITEM	LEAA REGION									
	1	2	3	4	5	6	7	8	9	10
Mobile Transceivers	2	2	1	1	2	1	1	1	2	2
Base Radio Transceiver	3	1	3	2	3	2	2	3	5	3
Hand-Held Transceivers	1	3	2	3	1	3	5	2	3	1
Digital Data Communications	7	4	8	8	5	9	3	8	1	6
Scramblers	4	7	4	4	4	4	6	5	8	5
Car Locaters	8	8	7	5	7	6	4	6	4	7
Repeater Transceivers	5	5	6	7	8	5	8	4	7	4
Tele-Printer Communications	6	6	5	6	6	7	7	7	6	8
Helmet with Built-in Transceiving Capacity	9	9	9	9	9	8	9	9	9	9

indicated that their departments do not use or were not planning to use items on the list because of large cost or lack of need. Many additional communications items were suggested:

Telecommunications Equipment*
Computer Dispatching*
Paging Systems
Generators
Radio Monitors
Miniature Transceivers
Portable/Mobile Repeaters
Undercover Transceivers
Microfische for Dispatch

Departments tended to discuss their problems with Communications equipment more than for any other list. Six respondents attempted to explain their rankings of this list.

3.4 Lethal Weapons

This 12-item list was the longest list in the EPQ. Since a wide variety of handguns and shoulder weapons are employed by police departments in this country, it was necessary to include at least the four most frequently used handgun calibers, the three most frequently used types of shoulder weapons, and five general types of ammunition in the list.

Table 3.4-1 shows the National composite ranks. The .38 Special Revolver was the top priority item, having received 40% of its ranks in the number 1 position. Only State Departments indicated a preference for another type of handgun, the .357 Magnum Revolver, ranking this item number 1 in 43% of the cases; the .357 Magnum also ranked first in the State

* These items would probably involve computers.

Table 3.4-1 Composite Ranks for All Departments for Lethal Weapons

CATEGORY ITEM	RANK
.38 Special Revolver	1
Regular Service Ammunition for Handguns	2
Shotgun	3
.357 Magnum Revolver	4
Frangible Bullets	5
Rifle	6
Regular Service Ammunition for Shoulder Weapons	7
High-Drag Bullets	8
9 mm Pistol	9
Carbine	10
Armor-Piercing Bullets	11
.45 Automatic	12

Table 3.4-2 Composite Ranks for All Cities for Lethal Weapons

CATEGORY ITEM	RANK
.38 Special Revolver	1
Regular Service Ammunition for Handguns	2
Shotgun	3
.357 Magnum Revolver	5
Frangible Bullets	4
Rifle	7
Regular Service Ammunition for Shoulder Weapons	6
High-Drag Bullets	8
9 mm Pistol	9
Carbine	10
Armor-Piercing Bullets	12
.45 Automatic	11

Department composite. (The detailed handgun questionnaire* showed that 94% of all departments had officers using a .38 handgun on duty, but 66% of all State Departments had officers using a .357 handgun on duty.) Region 10 respondents also showed less favor to the .38 Special, ranking it behind the .357 Magnum, Regular Service Ammunition for Handguns, and Shotguns. (89% of the departments in Region 10 had officers using a .357 Magnum on duty*.) The .38 Special ranked number one in all other composites. Furthermore, it was identified as having a significantly consistent high priority, both within aggregates and among aggregates (i.e. Department Types and Regions).

Regular Service Ammunition received the second highest priority rank in the National composite, but this result is somewhat attributable to the weighting factor. Handgun Ammunition ranked behind the .357 Magnum and the Shotgun in the unweighted version. Regular Service Ammunition for Shoulder Weapons ranked pretty far down the list, in the number 7 spot nationally. If it were not for the weights, this item would have ranked tenth (of twelve).

The Shotgun is clearly ranked ahead of all other shoulder weapons in every composite.

Of the more esoteric items, Frangible Bullets ranked ahead of both High-Drag and Armor-Piercing Bullets in all composites but Townships. Armor-Piercing bullets tended to be ranked poorly and in fact ranked next to last in the National composite (last in the unweighted case).

Tables 3.4-3 and 3.4-4 show the composite rankings for Department

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* See LEAA POLICE EQUIPMENT SURVEY OF 1972, Volume V: Handguns and Handgun Ammunition, NBSIR 73 214, August 1973.

Table 3.4-3 Department Type Composite Ranks for Lethal Weapons

CATEGORY ITEM	DEPARTMENT TYPE						
	State	County	City(1-9 Officers)	City(10-49 Officers)	City(50 or more Officers	Fifty Largest Cities	Township
.38 Special Revolver	3	1	1	1	1	1	1
Regular Service Ammunition for Handguns	2	2	2	3	2	2	4
Shotgun	4	4	3	4	3	3	3
.357 Magnum Revolver	1	5	4	2	5	9	2
Frangible Bullets	5	3	5	5	4	5	6
Rifle	6	6	6	6	6	7	8
Regular Service Ammunition for Shoulder Weapons	7	9	11	10	9	4	10
High-Drag Bullets	9	7	8	7	7	6	5
9 mm Pistol	8	8	7	9	8	10	12
Carbine	11	10	9	8	11	8	11
Armor-Piercing Bullets	10	11	12	12	10	12	9
.45 Automatic	12	12	10	11	12	11	7

Table 3.4-4 Region Composite Ranks for Lethal Weapons

CATEGORY ITEM	LEAA REGION									
	1	2	3	4	5	6	7	8	9	10
.38 Special Revolver	1	2	1	1	1	1	1	1	1	4
Regular Service Ammunition for Handguns	3	1	2	3	4	3	2	4	2	2
Shotgun	2	3	3	4	3	5	3	3	3	3
.357 Magnum Revolver	4	5	8	2	5	2	4	2	4	1
Frangible Bullets	8	6	5	6	2	4	5	5	6	5
Rifle	6	7	4	5	8	6	6	6	5	7
Regular Service Ammunition for Shoulder Weapons	9	4	9	8	10	9	7	10	7	11
High-Drag Bullets	12	8	10	9	6	7	8	9	8	9
9 mm Pistol	10	11	6	10	7	12	9	7	9	8
Carbine	5	9	7	7	9	8	10	8	12	10
Armor-Piercing Bullets	11	10	11	11	11	10	12	11	11	12
.45 Automatic	7	12	12	12	12	11	11	12	10	6

Types, and Regions, respectively. The level of agreement within each aggregate was 100%, as were the levels of agreement between Department Types and between Regions. The two Department Types which appeared to be most divergent were the Fifty Largest Cities and Townships. Even in this case, however, the level of agreement was about 88%.

Other items in this category suggested by respondents included rifle scope, pistol range, machine gun and submachine gun, small concealed handgun, holster, and tear gas adaptor. Eight respondents ranked only items which applied to them, and five provided explanation of their rankings. Three others emphasized the need for test standards.

3.5 Non-Lethal Weapons

As a general category, Non-Lethal Weapons received the smallest overall percentage of top priority ranks (2%). Several of the smaller departments indicated that some of the items did not apply to them or that there was a general lack of knowledge about some of the Non-Lethal Weapons in the list.

Although all levels of agreement were 100%, no single item seemed to dominate the top priority position in the composites. Tables 3.5-1 through 3.5-4 show the composite rankings. Of the eleven items, the Blackjacks/Saps, Batons/Billyclubs/Nightsticks, and the four tear gas related items tended to rank in the top six positions, while the remaining, less frequently used items, tended to have poorer composite ranks. This was true for the National composite, the City composite, four of the seven Department Types, and six of ten Regional composites. In the remaining composites, five of the six top positions were always filled by some combination of these same six items.

Table 3.5-1 Composite Ranks for All Departments for Non-Lethal Weapons

CATEGORY ITEM	RANK
Batons/Billy Clubs/Nightsticks	1
Tear Gas Dispensers	2
Tear Gas	3
Gas Grenades and Cannisters	4
Black Jacks/Saps	5
Tear Gas Generators	6
Tranquilizer Dart Guns	7
Water Cannon	8
Dye-Marker Guns	9
Pellet Guns	10
Electric Shockers	11

Table 3.5-2 Composite Ranks for All Cities for Non-Lethal Weapons

CATEGORY ITEM	RANK
Batons/Billy Clubs/Nightsticks	1
Tear Gas Dispensers	2
Tear Gas	3
Gas Grenades and Cannisters	4
Black Jacks/Saps	6
Tear Gas Generators	5
Tranquilizer Dart Guns	7
Water Cannon	9
Dye-Marker Guns	8
Pellet Guns	10
Electric Shockers	11

Table 3.5-3 Department Type Composite Ranks for Non-Lethal Weapons

CATEGORY ITEM	DEPARTMENT TYPE						
	State	County	City (1-9 Officers)	City (10-49 Officers)	City (50 or More Officers	Fifty Largest Cities	Township
Batons/Billy Clubs/Nightsticks	4	3	1	3	4	1	4
Tear Gas Dispensers	1	2	2	1	1	3	2
Tear Gas	2	4	4	2	2	2	1
Gas Grenades and Cannisters	3	1	5	4	3	4	3
Black Jacks/Saps	8	5	3	5	7	6	5
Tear Gas Generators	5	8	6	6	5	5	6
Tranquilizer Dart Guns	6	7	7	7	6	8	7
Water Cannon	11	6	8	11	8	9	11
Dye-Marker Guns	7	10	10	8	9	7	9
Pellet Guns	9	9	11	9	10	10	10
Electric Shockers	10	11	9	10	11	11	8

Table 3.5-4 Region Composite Ranks for Non-Lethal Weapons

CATEGORY ITEM	LEAA REGION									
	1	2	3	4	5	6	7	8	9	10
Batons/Billy Clubs/Nightsticks	4	1	1	4	2	3	3	4	3	4
Tear Gas Dispensers	1	4	3	1	3	2	2	2	1	2
Tear Gas	3	2	2	2	1	1	1	3	4	1
Gas Grenades and Cannisters	2	3	4	3	4	4	4	1	2	3
Black Jacks/Saps	6	7	5	5	5	6	6	7	6	8
Tear Gas Generators	5	5	6	6	8	5	5	6	5	5
Tranquilizer Dart Guns	9	6	7	7	7	9	7	5	7	6
Water Cannon	11	11	10	8	6	8	10	9	9	10
Dye-Marker Guns	7	9	9	9	9	7	8	8	10	9
Pellet Guns	8	8	11	10	10	11	9	10	8	11
Electric Shockers	10	10	8	11	11	10	11	11	11	7

Levels of agreement between pairs and other sub-aggregates of composite rankings were all very high (over 95%), even though the item ranks in each composite were not the same. This occurred because the same items consistently appeared in the same groups of rankings (e.g. the top six ranks). For example, considering the 4 City Department Types as a sub-aggregate of the seven Department Types (see Table 3.5-3), the level of agreement among these was 100%.

3.6 Vehicles

Vehicles, as a category, received the greatest number of number 1 ranks and was ranked number 2 in the National composite. The top priority Vehicle item was the Patrolcar in all Department Type composites, all Regional composites, the composite for the Cities, and the National composite (see Tables 3.6-1 through 3.6-4). Overall, Patrolcars was ranked number one in priority by 74% of the respondents. The range of percentages by Department Type was 61% (Counties) to 85% (States). One possible explanation for the dominance of Patrolcars in the rankings is the fact that all police departments were familiar with that item, all departments probably had at least one, and Patrolcars probably represented a significant fraction of their annual equipment budgets. (See the DQ on Patrolcars* for more details.) And, in addition, the notion of a performance standard was likely to be better understood when applied to Vehicles than to Protective Equipment and Clothing. Since patrolcars probably were,

* LEAA POLICE EQUIPMENT SURVEY OF 1972, Volume VII: Patrolcars, NBSIR 73 216, July 1973.

Table 3.6-1 Composite Ranks for All Departments for Vehicles.

CATEGORY ITEM	RANK
Patrolcars	1
Mobile Communications/Command/Control Vehicles	2
Other Land Vehicles	3
Motorcycles	4
Helicopters	5
Scooters	6
Boats and Other Watercraft	7
Other Aircraft	8

Table 3.6-2 Composite Ranks for All Cities for Vehicles.

CATEGORY ITEM	RANK
Patrolcars	1
Mobile Communications/Command/Control Vehicles	2
Other Land Vehicles	3
Motorcycles	4
Helicopters	6
Scooters	5
Boats and Other Watercraft	7
Other Aircraft	8

and still are, more frequently used than many other types of equipment, respondents may have developed stronger opinions regarding their drawbacks. It is interesting to note that the sum of the ranks for Patrolcars in Cities with 1-9 officers was 299, and there were 234 such cities in the sample for a mean rank of 1.28.

Table 3.6-2 shows the Cities composite ranking and Table 3.6-3 shows the Department Type composite rankings. Motorcycles and Scooters ranked behind Patrolcars (ranks 2 and 3, respectively) in the Fifty Largest Cities. These items received progressively poorer ranks in the composites of the smaller Cities, Counties and States.

Mobile Communications/Command/Control (MCCC) Vehicles ranked second in all Department Type composites except Cities With 1-9 Officers (where it was ranked third) and the Fifty Largest Cities (where it was ranked fourth). This item received the second highest number of rank positions (18%) and the largest percentage of number 2 ranks (31%) overall. MCCC Vehicles ranked ahead of Scooters in the Fifty Largest Cities unweighted composite, where Scooters ranked sixth, suggesting that a few of the largest cities (i.e. those with many full-time officers) ranked Scooters with high priority.

The State Department composite seemed to be significantly different from all the other Department Type composites, primarily due to the high priorities given Helicopters and Other Aircraft by the States. The levels of agreement between the State and other department types are given in Table 3.6-5.

Table 3.6-3 Department Type Composite Ranks for Vehicles.

CATEGORY ITEM	DEPARTMENT TYPE						
	State	County	City (1-9 Officers)	City (10-49 Officers)	City (50 or More Officers)	Fifty Largest Cities	Township
Patrolcars	1	1	1	1	1	1	1
Mobile Communications/Command/Control Vehicles	2	2	3	2	2	4	2
Other Land Vehicles	6	3	2	3	4	5	3
Motorcycles	5	6	4	4	3	2	4
Helicopters	3	4	7	6	6	6	7
Scooters	8	7	6	5	5	3	5
Boats and Other Watercraft	7	5	5	7	7	7	6
Other Aircraft	4	8	8	8	8	8	8

Table 3.6-4 Region Composite Ranks for Vehicles.

CATEGORY ITEM	LEAA REGION									
	1	2	3	4	5	6	7	8	9	10
Patrolcars	1	1	1	1	1	1	1	1	1	1
Mobile Communications/Command/Control Vehicles	2	3	3	2	2	2	2	2	2	2
Other Land Vehicles	3	5	2	4	3	3	3	4	5	5
Motorcycles	4	4	4	3	5	4	4	3	3	4
Helicopters	7	7	6	5	4	5	6	5	4	3
Scooters	5	2	5	6	7	6	5	7	7	7
Boats and Other Watercraft	6	6	7	8	6	7	7	8	8	6
Other Aircraft	8	8	8	7	8	8	8	6	6	8

Table 3.6-5. Levels of Agreement Between State Composite and Other Department Type Composites.

	Level of Agreement
State vs. County	94.6%
State vs. City (50 or More Officers)	91.1%
State vs. City (10-49 Officers)	86.2%
State vs. City (1-9 Officers)	81.1%
State vs. Township	81.1%
State vs. Fifty Largest Cities	72.6%

Since the level of agreement was 99.97% among all seven Department Types, it may be safely concluded that it was higher than this among all Department Types, excluding the States. Within each Department Type, the level of agreement among all respondents was 100%.

Regional composite rankings are given in Table 3.6-4. The number 2 position of Scooters in Region 2 may be explained by the high priority given that item by the single department having over two-thirds the total weight for that Region. With this exception, regional differences were relatively minor. Helicopters seemed to be ranked more favorably in the more western regions. The levels of agreement within each Region were 100%.

The most frequent comment made by respondents who ranked Vehicles first among the main categories was that Vehicles are probably the single most important type of equipment used by police departments. Several respondents indicated that their patrolcars, (basically modified passenger sedans), were inadequate for police use, not simply in terms of road performance, but also in terms of durability of seats, repair downtime and expense, and comfort. These aspects of the patrolcar were also revealed to be important by the DQ on Patrolcars.*

* ibid.

A larger than average number of Vehicles lists were not completely ranked. It is likely that the high cost of some of the items (Helicopters, Aircraft and Watercraft) and the absence of need eliminated them from purchase consideration. Several comments were also made regarding the desirability of a specialized police patrol vehicle.

Other items suggested include snowmobiles, 4-wheel drive vehicles for rugged terrain, armored vehicles, bicycles/light motorcycles, mobile laboratories, beach buggies, and amphibious vehicles.

3.7 Building Systems

As a general category, Building Systems ranked last in priority in the National composite. Overall, it received almost 48% of the rank 9 (of 9) responses, and only about 5% of the rank 1 responses. Interviews with department officials during the pretest phase of the project revealed that departments would almost always rank Building Systems low in priority unless they were considering, planning, or actually constructing such facilities.

Additionally, since the pretests demonstrated that it was difficult to identify a meaningful list of Building System components, a relatively short list of general entries, each encompassing a fairly wide scope of individual items, was developed. This list included: Detention Center Design/Construction; Institutional Furnishings, Police Station Design/ Construction; Institutional Equipments; and Building Materials. Detention Centers were meant to include only those facilities controlled by the department to whom the EPQ was sent. Institutional Furnishings included items such as desks, chairs, lighting fixtures, and the like. Institutional

Table 3.7-1 Composite Ranks for All Departments for Building Systems

CATEGORY ITEM	RANK
Police Station Design/Construction	1
Detention Center Design/Construction	2
Building Materials	3
Institutional Equipment	4
Institutional Furnishings	5

Table 3.7-2 Composite Ranks for All Cities for Building Systems

CATEGORY ITEM	RANK
Police Station Design/Construction	1
Detention Center Design/Construction	3
Building Materials	2
Institutional Equipment	4
Institutional Furnishings	5

Table 3.7-3 Department Type Composite Ranks for Building Systems

CATEGORY ITEM	DEPARTMENT TYPE						
	State	County	City(1-9 Officers)	City(10-49 Officers	City(50 or More Officers	Fifty Largest Cities	Township
Police Station Design/Construction	1	1	1	1	1	1	1
Detention Center Design/Construction	5	2	2	2	3	3	4
Building Materials	3	4	5	5	5	2	5
Institutional Equipment	2	3	4	3	2	4	2
Institutional Furnishings	4	5	3	4	4	5	3

Table 3.7-4 Region Composite Ranks for Building Systems

CATEGORY ITEM	LEAA REGION									
	1	2	3	4	5	6	7	8	9	10
Police Station Design/Construction	1	1	1	1	1	1	1	1	1	1
Detention Center Design/Construction	2	4	4	3	2	3	2	4	3	2
Building Materials	4	2	2	5	3	5	5	5	5	5
Institutional Equipment	3	3	3	2	4	2	3	2	2	3
Institutional Furnishings	5	5	5	4	5	4	4	3	4	4

Equipment included typewriters, filing cabinets, sanitary facilities, kitchen equipment, and heating/air conditioning.

Police Station Design/Construction received the largest proportion of number 1 ranks (63%) and was the top priority entry in every composite (although it did rank number 2 in the unweighted County composite, where Detention Center Design/Construction ranked number 1). A large majority of the written comments about this list pertained to the inadequacies of Police Station Design/Construction.

Tables 3.7-1 through 3.7-4 show the composite rankings for the Nation, the Cities, the Department Types, and the Regions, respectively. Statistical analyses of these data are probably less meaningful since each of the items covered a broad range of equipment and/or facilities, and respondents may not have had the same things in mind while assigning ranks. Differences among Department Type composites were more pronounced than those among Regions. For example, State and Township Departments gave low rankings to the Detention Center Design/Construction because, perhaps, almost none of the State and Township Departments said that they were responsible for detaining prisoners longer than one day (see Table 2.0-1). The level of agreement among Department Types was 99.9%, and it was 100% within each Department Type. The level of agreement was 100% within each Region and among the ten Regions.

3.8 Emergency Warning and Rescue Equipment

The Emergency Warning and Rescue Equipment list contained eleven items. The Combined Siren/Light/Loudspeaker (CS/L/L) system ranked number 1 in all composites except two, and in both of these cases it was ranked number 1 in the unweighted composite. The CS/L/L system received

38% of the total first priority ranks for this list, ranging from a low of 27% of Townships to 45% of Cities With 50 or More Officers. Furthermore, this item was identified by the rank sum test (see Appendix D) as having been consistently ranked in a high priority position in every aggregate considered. Pretest interviews revealed that many departments were considering or planning to convert to a CS/L/L system. Note that two of the components of this system, Flashing Lights and Sirens, also received relatively high rankings (second and fourth in the National composite). Furthermore, the Lights and Sirens DQ* showed that flashing lights were used by 99% of all responding departments for signallying motorists to pull over at night and that 62% of those departments used sirens in the same context. These two items of equipment were the two most frequently used pieces of emergency warning equipment, overall.

The relatively high rankings of Rescue Equipment (third in the National and Cities composites) perhaps reflect the high percentages of departments (60-67% of each Department Type, see Table 2.0-1) which assume responsibility for Emergency Aid and Rescue activities in their jurisdictions.

The National composite and the City composite appear in Tables 3.8-1 and 3.8-2, respectively. Note that except for a reversal of the eighth and ninth-ranked items, they were identical. The unweighted composites of these two aggregates were identical and were only slightly different from the corresponding weighted composites.

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* LEAA POLICE EQUIPMENT SURVEY OF 1972, Volume III: Sirens and Emergency Warning Lights, NBSIR 73 212, 1973.

Table 3.8-1 Composite Ranks for All Departments for Emergency Warning and Rescue Equipment

CATEGORY ITEM	RANK
Combined Siren/Light/Loudspeaker System	1
Flashing Lights	2
Rescue Equipment	3
Sirens	4
First Aid Kits	5
Spot Lights	6
Loudspeakers	7
Fire Extinguishers	8
Flares	9
Flood Lights	10
Reflectors	11

Table 3.8-2 Composite Ranks for All Cities for Emergency Warning and Rescue Equipment

CATEGORY ITEM	RANK
Combined Siren/Light/Loudspeaker System	1
Flashing Lights	2
Rescue Equipment	3
Sirens	4
First Aid Kits	5
Spot Lights	6
Loudspeakers	7
Fire Extinguishers	9
Flares	8
Flood Lights	10
Reflectors	11

Table 3.8-3 shows the composite rankings for the seven Department Types. The level of agreement within each Department Type was 100%, as it was among Department Types. The rank correlation coefficient between the composite for the Fifty Largest Cities and the composite for Townships, which seems to be the most divergent pair, was 99.7%. Thus, the results showed general agreement among all types of departments.

Within each Region and among Regions, the levels of agreement were 100%. The Regional composite rankings appear in Table 3.8-4. The pair of Regions appearing to have the most widely divergent composites were Regions 2 and 7, where the level of agreement was only 91%. It should be noted that a comparison of the unweighted composites of these two regions yielded a 100% level of agreement.

Additional items named by respondents included: Oxygen/oxygen kits, resuscitators/hand operated breathing devices, blankets, folding ladders (all of which may be considered "rescue equipment"); flashlights/batteries, high intensity lights, mounting devices for items on the list, traps, and animal snares.

Twelve respondents made comments regarding the use or non-use of specific items, and four indicated problems with specific items. Four other respondents suggested the use of standard colors for lighting systems (e.g. blue for police, red for fire). As mentioned earlier (see Section 2.0), Emergency Aid and Rescue was the most consistently-checked activity of departments, with an overall average of nearly 63%.

Table 3.8-3 Department Type Composite Ranks for Emergency Warning and Rescue Equipment

CATEGORY ITEM	DEPARTMENT TYPE						
	State	County	City (1-9 Officers)	City (10-49 Officers	City (50 or More Officers)	Fifty Largest Cities	Township
Combined Siren/Light/Loudspeaker System	2	1	1	1	1	1	1
Flashing Lights	1	2	2	2	2	3	4
Rescue Equipment	3	3	3	3	3	2	2
Sirens	4	5	7	5	5	4	5
First Aid Kits	5	4	5	4	4	8	3
Spot Lights	9	8	6	6	6	5	8
Loudspeakers	6	7	9	7	7	6	10
Fire Extinguishers	8	6	8	9	8	7	6
Flares	7	10	4	8	10	9	7
Flood Lights	11	9	10	10	9	11	11
Reflectors	10	11	11	11	11	10	9

Table 8.3-4 Region Composite Ranks for Emergency Warning and Rescue Equipment

CATEGORY ITEM	LEAA REGION									
	1	2	3	4	5	6	7	8	9	10
Combined Siren/Light/Loudspeaker System	1	3	1	1	1	1	1	1	1	1
Flashing Lights	4	2	2	2	2	2	2	2	2	2
Rescue Equipment	3	1	3	3	3	3	6	3	4	4
Sirens	6	4	5	5	5	5	7	5	3	6
First Aid Kits	2	6	6	4	4	4	4	4	9	3
Spot Lights	9	8	7	6	8	7	5	7	6	5
Loudspeakers	10	9	8	8	6	6	3	8	5	8
Fire Extinguishers	8	5	10	7	7	8	8	9	10	7
Flares	5	10	4	10	9	9	10	6	7	10
Flood Lights	7	11	11	11	10	10	9	10	8	9
Reflectors	11	7	9	9	11	11	11	11	11	11

3.9 Surveillance and Security Equipment

Surveillance and Security Equipment was the eighth ranked category (of nine) in the National composite for the Categories list. The levels of agreement between the composite rankings for items on this list, however, tended to be considerably lower than in the other lists, particularly among Department Type composites.

Two National composite rankings of Surveillance and Security Equipment, weighted and unweighted, are presented in Table 3.9-1. The weighting scheme played a significant role here as may be seen by a comparison of the two rankings. This comparison, as well as the comparison of the Department Type composites, showed that, in general, small departments (those with fewer officers) tended to give Alarm Displays in Department better rankings while large departments tended to give Low Light Level Closed Circuit TV better rankings.

The Cities composite (Table 3.9-2) was basically similar to the National composite.

Table 3.9-3 shows the Department Type composites. State Departments ranked Night Vision Scope Suitable for Rifles in the top priority position in both the weighted and unweighted composites. This item tended to rank poorly in other Department Type composites. Cities and Townships, except for the Fifty Largest, ranked Alarm Displays in Departments with a high priority; this item was ranked sixth in the Fifty Largest Cities composite. Hand-held Night Vision was the top priority item in the composite for the Fifty Largest Cities. A comparison of the Cities composite with each individual City Type composite shows the effect of the larger weights carried by the larger cities. This is even further dramatized by the fact

Table 3.9-1 Composite Ranks for All Departments for Surveillance and Security Equipment

CATEGORY ITEM	RANKS Weighted	Unweighted
Low-Light Level Closed Circuit TV	1	5
Hand-Held Night Vision Equipment	2	2
Alarm Displays in Department	3	1
Still Camera Equipment for Night Vision Devices	4	3
Closed Circuit TV	5	8
Night Vision Scope Suitable for Rifles	6	6
Lenses for Night Vision Surveillance Equipment	7	7
General Purpose Locks	8	4
Special Locking Devices for Detention Centers	9	9

Table 3.9-2 Composite Ranks for All Cities for Surveillance and Security Equipment

CATEGORY ITEM	RANK
Low-Light Level Closed Circuit TV	1
Hand-Held Night Vision Equipment	2
Alarm Displays in Departments	3
Still Camera Equipment for Night Vision Devices	5
Closed Circuit TV	4
Night Vision Scope Suitable for Rifles	7
Lenses for Night Vision Surveillance Equipment	6
General Purpose Locks	8
Special Locking Devices for Detention Centers	9

that the level of agreement between the weighted and unweighted City composites is only 87%. Another example of the effects of the weights on the rankings is the fact that Low Light Level Closed Circuit TV was ranked first in the weighted County composite although it was ranked fifth in the unweighted County composite.

Even though Department Type composite rankings were somewhat dissimilar (for example, the level of agreement was only 38% between the State composte and the Township composite), the level of agreement among all seven Department Types was 97.7% for the weighted composite and 99.5% for the unweighted. Furthermore, it was 100% within each Department Type. Nevertheless, pairwise comparisons yielded very low levels of agreement.

Regional differences were negligible in comparison to Department Type differences. The Regional composites are given in Table 3.9-4. The levels of agreement within Regions were all 100% as was the level of agreement among Regions. The number one priority item was either Alarm Displays in Department or Low-Light Level Closed Circuit TV in each Regional composite but one, namely Region 2 where Hand-Held Night Vision Equipment occupied the top priority position. (Recall that one of the Fifty Largest Cities has over two-thirds of the total Region 2 weight.) It is interesting to note that Alarm Displays in Department ranked first in every unweighted Regional composite, having received over 41% of the overall top priority ranks.

Other items suggested by respondents for this category include binoculars, telephoto camera equipment, restraint equipment for those apprehended, listening devices (electronic eavesdropping), radar, and mobile surveillance vans (which would properly belong in the Vehicles list).

Table 3.9-3 Department Type Composite for Surveillance and Security Equipment

CATEGORY ITEM	DEPARTMENT TYPE						
	State	County	City (1-9 Officers)	City (10-49 Officers)	City (50 or More Officers	Fifty Largest Cities	Township
Low-Light Level Closed Circuit TV	5	1	7	2	1	2	2
Hand-Held Night Vision Equipment	2	4	5	5	3	1	7
Alarm Displays in Department	7	3	1	1	2	6	1
Still Camera Equipment for Night Vision Devices	4	5	3	4	7	4	3
Closed Circuit TV	3	9	8	3	4	3	6
Night Vision Scope Suitable for Rifles	1	6	6	7	5	7	9
Lenses for Night Vision Surveillance Equipment	6	8	4	6	6	5	8
General Purpose Locks	8	2	2	8	9	9	5
Special Locking Devices for Detention Centers	9	7	9	9	8	8	4

Table 3.9-4 Region Composite Ranks for Surveillance and Security Equipment

CATEGORY ITEM	LEAA REGION									
	1	2	3	4	5	6	7	8	9	10
Low-Light Level Closed Circuit TV	2	5	1	4	1	4	5	1	1	1
Hand-Held Night Vision Equipment	5	1	2	3	3	3	4	5	4	6
Alarm Displays in Department	1	3	4	1	4	1	1	2	5	2
Still Camera Equipment for NightVision Devices	8	2	3	5	5	5	3	3	7	5
Closed Circuit TV	4	4	7	6	2	7	7	6	3	3
Night Vision Scope Suitable for Rifles	6	7	8	2	6	2	6	7	8	4
Lenses for Night Vision Surveillance Equipment	3	6	5	7	7	6	2	4	9	7
General Purpose Locks	9	8	6	9	9	8	8	8	2	9
Special Locking Devices for Detention Centers	7	9	9	8	8	9	9	9	6	8

Thirty-four of the respondents indicated that some of the items listed did not apply to their departments, that some of the equipment was beyond the scope of their departments, or that they were not familiar with some of the items on the list. Two respondents, both City departments, expressed a need for performance data and test methods.

3.10 Detection Systems

As a general category, Detection Systems ranked seventh in priority for development of standards. The list of items in this category numbers eleven. Twenty-six respondents indicated that they did not use many of the items on the list, and six said that they had difficulty ranking the items. Overall, each of the items was left un-ranked by about 6% of the respondents. Despite this, a multitude of additional items were suggested, including laboratory equipment (microscopes, infrared lighting, ultra-violet equipment), tape recording equipment, automobile speed detection/radar equipment, and camera equipment.

In general, the rankings appeared to fall into two groups reflecting generally higher and lower priorities for standards. This is perhaps best represented by Table 3.10-1, which presents the percentages of departments ranking each item in one of the top five positions.

Table 3.10-1. Percent of Sample Departments Ranking That Item 1,2,3,4 or 5.

ITEM	% Respondents
Field Narcotic Screening Kits	79
Quantitative Breath-Alcohol Screening Device	68
Pre-Arrest Breath-Alcohol Screening Device	72
Narcotic and Explosive Detectors	72
Fingerprint Kits	68
Polygraph	43
Hand-Held Metal Weapons Detector	25
Walk-Through Metal Weapons Detector	15
X-Ray Equipment for Bomb Squads	14
Other Metal Weapons Detectors	11
Gas Chromatograph for Lab. Use Only	7

The National composite, City composite, Department Type composites, and the Region composites, appear in Tables 3.10-2 through 3.10-5, respectively. A glance at the composites shows that the grouping shown above was maintained (in some cases with minor variation) in all of the composites, except for the Fifty Largest Cities. The pattern was duplicated exactly, however, in all of the unweighted composites. Thus, the weights played a significant role in the Fifty Largest Cities composite where Walk-Through and Hald-Held Metal Weapons Detectors were given higher priority. The only item identified consistently in a high priority position in all aggregates considered was Field Narcotic Screening Kits.

The levels of agreement within Department Types and within Regions were 100%, as were the levels of agreement among Department Type composites and among Regional composites. An inspection of Table 3.10-4 suggests that the Fifty Largest Cities composite ranking was the only composite that was different from the others. For example, the level of agreement between the Fifty Largest Cities and Townships was 80%.

Table 3.10-2 Composite Ranks for All Departments for Detection Systems

CATEGORY ITEM	RANK
Fingerprint Kits	1
Field Narcotic Screening Kits	2
Narcotic and Explosive Detectors	3
Quantitative Breath-Alcohol Device	4
Pre-Arrest Breath-Alcohol Screening Device	5
Polygraph	6
Hand-Held Metal Weapons Detectors	7
X-Ray Equipment Used by Bomb Squads	8
Walk-Through Metal Weapons Detectors	9
Gas Chromatograph for Laboratory Use Only	10
Other Types of Weapons Detectors	11

Table 3.10-3 Composite Ranks for All Cities for Detection Systems

CATEGORY ITEM	RANK
Fingerprint Kits	1
Field Narcotic Screening Kits	2
Narcotic and Explosive Detectors	3
Quantitative Breath-Alcohol Device	4
Pre-Arrest Breath-Alcohol Screening Device	5
Polygraph	6
Hand-Held Metal Weapons Detectors	7
X-Ray Equipment Used by Bomb Squads	9
Walk-Through Metal Weapons Detectors	8
Gas Chromatograph for Laboratory Use Only	10
Other Types of Weapons Detectors	11

Table 3.10-4 Department Type Composite Ranks for Detection Systems

CATEGORY ITEM	DEPARTMENT TYPE						
	State	County	City(1-9 Officers	City(10-49 Officers)	City(50 or More Officers)	Fifty Largest Cities	Township
Fingerprint Kits	5	1	1	4	5	1	5
Field Narcotic Screening Kits	3	3	3	1	1	5	1
Narcotic and Explosive Detectors	4	2	5	5	2	2	4
Quantitative Breath-Alcohol Device	1	4	2	3	3	8	2
Pre-Arrest Breath-Alcohol Screening Device	2	7	4	2	4	10	3
Polygraph	6	6	6	6	6	6	6
Hand-Held Metal Weapons Detectors	9	10	7	7	8	3	7
X-Ray Equipment Used by Bomb Squads	8	5	9	10	7	7	8
Walk-Through Metal Weapons Detectors	11	9	8	8	9	4	9
Gas Chromatograph for Laboratory Use Only	7	8	10	11	11	9	11
Other Types of Weapons Detectors	10	11	11	9	10	11	10

Table 3.10-5 Region Composite Ranks for Detection Systems

CATEGORY ITEM	LEAA REGION									
	1	2	3	4	5	6	7	8	9	10
Fingerprint Kits	5	1	1	5	5	6	5	5	1	5
Field Narcotic Screening Kits	1	2	3	1	2	2	1	2	5	1
Narcotic and Explosive Detectors	3	4	5	2	1	1	3	1	4	3
Quantitative Breath-Alcohol Device	2	6	2	3	4	3	4	4	2	4
Pre-Arrest Breath-Alcohol Screening Device	4	5	7	4	6	4	2	3	8	2
Polygraph	7	9	4	6	7	5	6	6	7	6
Hand-Held Metal Weapons Detectors	8	7	8	7	3	7	7	9	10	8
X-Ray Equipment Used by Bomb Squads	6	8	9	8	8	8	11	10	6	7
Walk-Through Metal Weapons Detectors	9	3	6	9	9	9	9	8	9	11
Gas Chromatograph for Laboratory Use Only	11	11	11	11	11	10	8	7	3	9
Other Types of Weapons Detectors	10	10	10	10	10	11	10	11	11	10

APPENDIX A

B
NBS-883
May 1972

OMB 41-F72030
Approval Expires June 30, 1973

U.S. Department of Commerce
National Bureau of Standards

EQUIPMENT PRIORITIES QUESTIONNAIRE

Police Equipment Survey

Sponsored By:

National Institute of Law Enforcement and Criminal Justice
Law Enforcement Assistance Administration
U.S. Department of Justice

Directed and Conducted By:

Behavioral Sciences Group
National Bureau of Standards
Washington, D.C. 20234
Phone: 301-921-3558

ABOUT THIS SURVEY

WHY ONE MORE SURVEY?

Every police department in this country has to have special equipment to do its law enforcement work. In many cases departments have been forced to buy equipment that was designed for general civilian use.

The Law Enforcement Assistance Administration (LEAA) of the Department of Justice, is trying to help the police obtain equipment suited to their particular needs. It has set up a Law Enforcement Standards Laboratory which will write voluntary STANDARDS for several kinds of police equipment. The standards will be based on the complaints and suggestions that you and other law enforcement officials make about the equipment you are now using. Police departments will be able to use these standards, if they wish, when selecting and buying equipment for their departments.

WHAT IS A STANDARD?

Most of the standards for law enforcement equipment will describe the minimum performance that will be acceptable for certain types of police equipment. Materials and design will still be up to the manufacturer. The standard for handguns, for example, will state that the gun must be able to perform in certain ways under various conditions.

WHY STANDARDS?

When the Law Enforcement Standards Laboratory sets up STANDARDS for police equipment, it will be one part of an overall EQUIPMENT IMPROVEMENT PROGRAM by LEAA's National Institute of Law Enforcement and Criminal Justice (NILECJ). Standards are one of the best ways of giving EVERY law enforcement agency help in knowing what to look for when they go to buy equipment. These standards will be a way for YOU, the BUYER, to tell the equipment maker, the SELLER, what you want and must have to do your work well.

LEAA NEEDS YOUR HELP in deciding what equipment items should have standards written for them. That is what this questionnaire is about.

HOW TO FILL IN THIS QUESTIONNAIRE

1. This questionnaire asks about nine different types of police equipment. The officers in your department who know the most about actual operations and/or maintenance of each of these different equipment groups should be asked to fill in the parts of this questionnaire that they know most about. Do not tear pages out of the questionnaire. Each person who answers must read these instructions.

2. Instructions in how questions should be answered vary from place to place. All instructions appear in boxes - please be sure to read them carefully.

3. Fill in the questionnaires completely. LEAA needs to know when a piece of equipment is NOT important to you as well as when it is important.

4. Answer all questions for YOUR OWN DEPARTMENT. Do not try to decide what might be best for police departments in general. LEAA wants to know about YOUR needs.

5. We would like to have your COMMENTS about the questions. Use the "Comments" section provided but do not write comments anywhere else because all questionnaires will be machine processed. Any comments written in among the regular questions will confuse the keypunch operators. Please PRINT your comments CLEARLY!

6. If you will answer all questions in the space provided, the survey results will be much less expensive to process.

7. No individual department will be identified in the report of this survey; all results will be published only in table form. Please be as accurate as you can.

8. When the questionnaires are completely filled in, put all of them in the stamped, addressed envelope and return it to the National Bureau of Standards.

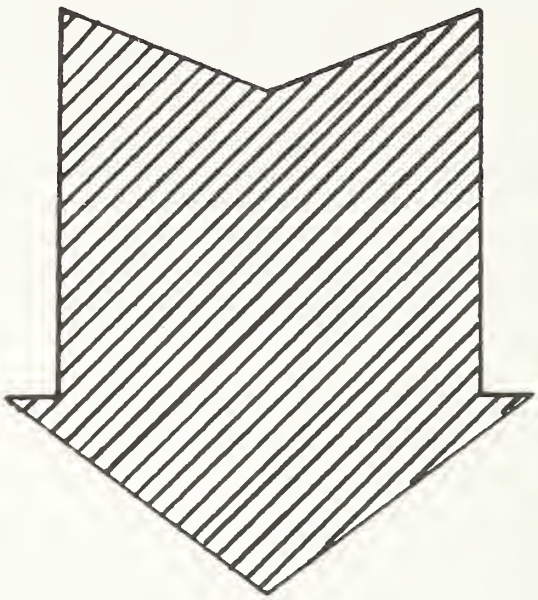
9. If you have any questions, write or call collect:

   E. Bunten or P. Klaus
   Technology Building, A-110
   National Bureau of Standards
   Washington, D.C. 20234
   Phone: 301--921-3558

10. Only by getting answers to these questionnaires from the men who are using the equipment can LEAA find out what police departments really need. NILECJ must have your help before it can begin to help you solve your equipment problems.

11. If you would like to have a copy of the results of this survey, please let us know at the end of the questionnaire.

READ THIS INSTRUCTION



Almost every question in this questionnaire asks you to tell us which items of equipment you think are most in need of STANDARDS. By this we mean:

It is IMPORTANT for a piece of equipment to have a standard written <u>if you think:</u>

...It does not now give good performance;

...It needs to be made more suitable for police work;

...You may be buying some for your department and could use guidelines in choosing among the brands offered.

It is NOT important for a piece of equipment to have a standard written <u>if you think</u>...

...It meets your needs as it is;

...Your department does not now use it and doesn't expect to use it.

I. FIRST -- THE IMPORTANCE OF GENERAL TYPES OF EQUIPMENT

1. This list and the next page, "Why Did You Mark It Number 1?", should be filled in by the person in your department who knows most about your department's OVERALL equipment needs.

2. Listed below are 9 types of equipment. Look over the entire list and then number the items in order of THEIR IMPORTANCE TO YOUR DEPARTMENT in terms of YOUR DEPARTMENT'S GENERAL NEED FOR STANDARDS. Put 1 by the MOST important, and 9 by the least important.

3. Do not put the same number beside more than one type of equipment.

NUMBER
(1-9)

_____ DETECTION SYSTEMS: For example; explosives detectors, weapons detectors, dangerous drug detectors, breath analyzers.

_____ SECURITY EQUIPMENT: For example; surveillance equipment, night vision devices, locks, alarm displays for receiving direct-to-police alarms.

_____ EMERGENCY WARNING AND RESCUE EQUIPMENT: For example; sirens, flashing lights, first aid equipment, fire extinguishers, flood lights.

_____ BUILDING SYSTEMS: For example; building materials, building furnishings, building supplies.

_____ VEHICLES: For example; patrolcars, motorcycles, scooters, boats, aircraft.

_____ WEAPONS, LETHAL AND RELATED AMMUNITION: For example; handguns, shotguns, rifles, ammunition, special purpose ammunition.

_____ WEAPONS, NON-LETHAL: For example; tear gas, tranquilizer dart guns, blackjacks, water cannon, batons, dye-marker guns.

_____ COMMUNICATIONS EQUIPMENT AND SUPPLIES: For example; scramblers, radios, car locators, repeaters.

_____ PROTECTIVE EQUIPMENT AND CLOTHING: For example; body armor, shields, helmets, gas masks, uniforms.

Comments: _____

_____

_____

WHY DID YOU MARK IT NO. 1?

1. Write on line 1 below the name of the equipment you marked on the previous page as the most important (Number 1) to your department in terms of needs for standards.

2. Read below the entire list of possible reasons why that kind of equipment is most in need of standards.

3. Mark X by the two reasons that come closest to telling why that type of equipment needs standards most FROM YOUR DEPARTMENT'S POINT OF VIEW.

1. The type of equipment we named as number 1 in importance on page 5 was:

_____

2. Which two of the statements below do you think BEST describe why this type of equipment is most important to your department in terms of needs for standards:

MARK X
by TWO

_____ Most of this kind of equipment is now made by one or two firms. Standards might encourage others to start making it.

_____ We plan to buy this kind of equipment in the near future. Standards would help us to select the best equipment at the least cost.

_____ Much of the equipment we now have of this kind does not really meet our needs. Standards could be used to guide the manufacturers who develop equipment.

_____ We now have maintenance and repair problems with much of this kind of equipment. Standards might help solve these problems.

_____ We buy equipment in this category from several different makers and find that parts and components cannot be interchanged among the different brands. Standards might help solve this problem.

_____ When we buy equipment in this category, we must compare many different brands. If there were standards, we could stop a lot of this investigation and/or testing.

_____ We are not able to test this type of equipment. If there were standards, we could use the results of tests made by the laboratory.

_____ Other (Specify)_____

_____

II. ABOUT PARTICULAR ITEMS OF EQUIPMENT

On page 5 of this questionnaire you were asked to number 9 general kinds of equipment from MOST to LEAST IMPORTANT in terms of your department's need for standards. Now we ask that you tell us about the importance of performance standards for some <u>particular items</u> of equipment within those general types.

There are nine lists of equipment items on the next nine pages: Building Systems, Communications Systems, Detection Systems, Emergency Warning and Rescue Equipment, Protective Equipment and Clothing, Security Equipment, Vehicles, Lethal Weapons and Related Ammunition, and Non-Lethal Weapons. If there are officers in your department who know more about actual operations and/or maintenance of some of these groups, this questionnaire should be passed about for them to fill in the section they know most about.

****

EACH OFFICER HELPING TO ANSWER THIS QUESTIONNAIRE MUST READ THE INSTRUCTION ON PAGE 4 OF THE QUESTIONNAIRE AS WELL AS THE GENERAL INSTRUCTIONS FOR THIS SECTION.

****

On the next 9 pages ...

1. Read through the whole list on a page before marking any.

2. Put a number <u>1</u> by the equipment which needs standards MOST, a number 2 by the equipment which has the <u>second</u> greatest need for standards, etc., until you have given a number to all the equipment on the list.

3. <u>Do not</u> put the same number beside more than one item on any one list.

4. Do not add items to the lists to be numbered. If you think something should be added, put it in the space at the bottom of the page.

5. Number the lists in pencil first so that your changes, if any, will be easier to make.

6. THE LISTS OF ITEMS ON THE NEXT 9 PAGES DO NOT INCLUDE ALL POSSIBLE EQUIPMENT. SOME OF THE ITEMS REPRESENT GROUPS OF EQUIPMENT. If we had listed <u>every</u> possible equipment, the lists would have been much too long. The equipment listed often represent several kinds of material.

7. The instructions on this page apply to each of the lists on the next 9 pages. Consider each page separately when numbering equipment items.

II-A: COMMUNICATIONS EQUIPMENT AND SUPPLIES

Number the items in this list from 1 (most important) to 9 (least important) IN TERMS OF YOUR DEPARTMENT'S NEEDS FOR STANDARDS.

NUMBER
(1 to 9) EQUIPMENT ITEM

_____ Digital Data Communications (allows two-way transmission of messages using keyboards and printers in police cars and headquarters)

_____ Mobile Transceivers (car radios)

_____ Base Radio Transceiver

_____ Helmet with Built-in Receiving and/or Transmitting Capability

_____ Car Locators (automatically transmit signals to headquarters indicating the location of the car)

_____ Hand-held Transceivers (portable radios)

_____ Repeater Transceivers (placed in elevated locations to re-transmit signals to headquarters)

_____ Scramblers (to scramble messages so they can be understood only by the police)

_____ Tele-printer Communications (allows headquarters to transmit a message to a printer in the police car)

List in the spaces below any important equipment items that you think should have been in the Communications Equipment and Supplies list above.

ADDITIONAL ITEMS

_____

_____

_____

_____

Comments: _____

_____

_____

II-B: DETECTION SYSTEMS

Number the items in this list from 1 (most important) to 11 (least important) IN TERMS OF YOUR DEPARTMENT'S NEEDS FOR STANDARDS.

NUMBER
(1 to 11) EQUIPMENT ITEM

_____ Polygraph

_____ Field Narcotic Screening Kits (chemical tests used BEFORE arrest to distinguish narcotics from non-narcotics)

_____ X-ray Equipment Used By Bomb Squads

_____ Gas Chromatograph For Laboratory Use Only

_____ Walk-through Metal Weapons Detectors

_____ Hand-held Metal Weapons Detectors

_____ OTHER Types of Weapons Detectors (example: X-ray)

_____ Fingerprint Kits

_____ Pre-arrest Breath-alcohol Screening Device (used BEFORE arrest)

_____ Quantitative Breath-alcohol Device (used AFTER arrest, can be used for evidence)

_____ Narcotic and Explosive Detectors

List in the spaces below any important equipment items that you think should have been included in the Detection Systems list above.

ADDITIONAL ITEMS

_____

_____

_____

_____

Comments: _____

_____

_____

_____

II-C: EMERGENCY WARNING AND RESCUE EQUIPMENT

Number the items in this list from 1 (most important) to 11 (least important) IN TERMS OF YOUR DEPARTMENT'S NEEDS FOR STANDARDS.

NUMBER
(1 to 11) EQUIPMENT ITEM

_____ Rescue Equipment

_____ Reflectors (OTHER than on cars - fluorescent reflective triangles to be used in place of flares)

_____ Spot Lights (either on vehicle or hand-held)

_____ Flashing Lights (beacons or flashers on top of patrolcars)

_____ Combined Siren/Light/Loudspeaker System

_____ Fire Extinguishers

_____ Loudspeakers (vehicle mounted)--not PA systems in police departments

_____ Sirens

_____ First Aid Kits

_____ Flood Lights

_____ Flares (chemical and electronic)

List in the spaces below any important equipment items that you think should have been included in the Emergency Warning and Rescue Equipment List above.

ADDITIONAL ITEMS

_____

_____

_____

_____

Comments: _____

_____

_____

II-D: PROTECTIVE EQUIPMENT AND CLOTHING

Number the items in this list from 1 (most important) to 11 (least important) IN TERMS OF YOUR DEPARTMENT'S NEEDS FOR STANDARDS.

NUMBER
(1 to 11) EQUIPMENT ITEM

_____ Ballistic Helmets (having some degree of resistance to penetration by bullets)

_____ Crash Helmets (for motorcycle riders)

_____ Riot Helmets

_____ High Visibility Clothing or Patches

_____ Hand-held Shields

_____ Vehicle Armor

_____ Police Uniform

_____ Body Armor

_____ Gas Masks

_____ Bomb Disposal Devices (Bomb Protective Suits, Bomb Baskets, Bomb Trailers)

_____ Rainwear

List in the spaces below any important equipment items you think should have been included in the Protective Equipment and Clothing list above.

ADDITIONAL ITEMS

_____

_____

_____

Comments: _____

_____

_____

_____

II-E: SURVEILLANCE AND SECURITY EQUIPMENT

Number the items in this list from 1 (most important) to 9 (least important) IN TERMS OF YOUR DEPARTMENT'S NEEDS FOR STANDARDS.

NUMBER (1 to 9) EQUIPMENT ITEM

_____ Night Vision Scope Suitable for Rifles (can also be hand-held when needed)

_____ Hand-held Night Vision Equipment (nightscope, infrared. Not suitable for rifle mounting)

_____ General Purpose Locks (padlocks, door locks)

_____ Special Locking Devices for Detention Centers

_____ Still Camera Equipment to be Used with Night Vision Devices

_____ Lenses for Night Surveillance Equipment

_____ Closed Circuit TV (which needs daylight or artificial illumination)

_____ Low-Light Level Closed Circuit TV (operates under night-time conditions without artificial light)

_____ Alarm Displays in Department (for receiving burglar or hold-up alarms)

List in the spaces below any important equipment items that you think should have been included in the Surveillance and Security Equipment list above.

ADDITIONAL ITEMS

_____

_____

_____

Comments: _____

_____

_____

II-F: VEHICLES

Number the items in this list from 1 (most important) to 8 (least important) IN TERMS OF YOUR DEPARTMENT'S NEEDS FOR STANDARDS.

NUMBER (1 to 8) EQUIPMENT ITEM

_____ Boats and Other Watercraft

_____ Patrolcars

_____ Helicopters

_____ Other Aircraft

_____ Motorcycles

_____ Scooters

_____ Mobile Communications/Command and Control Vehicles

_____ Other Land Vehicles (Paddy Wagons, Surveillance Vans, Dog Wagons, Ambulances, etc.)

List in the spaces below any important equipment items that you think should have been included in the Vehicles list above.

ADDITIONAL ITEMS

_____

_____

_____

Comments: _____

_____

_____

II-G: WEAPONS, LETHAL AND RELATED AMMUNITION

Number the items in this list from 1 (most important) to 12 (least important) IN TERMS OF YOUR DEPARTMENT'S NEEDS FOR STANDARDS.

NUMBER (1 to 12)	EQUIPMENT ITEM
_____	Rifle
_____	.357 Magnum Revolver
_____	Regular Service Ammunition for Shoulder Weapons
_____	Carbine
_____	.38 Special Revolver
_____	Shotgun
_____	9 mm Pistol
_____	High-drag Bullets (bullets with limited range)
_____	Regular Service Ammunition for Handguns
_____	Armor-piercing Bullets
_____	.45 Automatic
_____	Frangible Bullets (designed to break up when they hit and not ricochet)

List in the spaces below any important equipment items that you think should have been included in the Lethal Weapons and Related Ammunition list above.

ADDITIONAL ITEMS

_____

_____

_____

Comments: _____

_____

_____

_____

II-H: WEAPONS, NON-LETHAL

Number the items in this list from 1 (most important) to 11 (least important) IN TERMS OF YOUR DEPARTMENT'S NEEDS FOR STANDARDS.

NUMBER (1 to 11)	EQUIPMENT ITEM
_____	Tear Gas (its chemical formulation)
_____	Tear Gas Dispensers (hand-held)
_____	Tear Gas Generators
_____	Pellet Guns
_____	Electric Shockers
_____	Dye-marker Guns
_____	Gas Grenades and Canisters
_____	Tranquilizer Dart Guns
_____	Water Cannon (dispenses water for crowd control)
_____	Batons/Billy Clubs/Nightsticks
_____	Blackjacks/Saps

List in the spaces below any important equipment items that you think should have been included in the Non-Lethal Weapons list above.

ADDITIONAL ITEMS

_____

_____

_____

Comments: _____

_____

_____

_____

Number the items in this list from 1 (most important) to 5 (least important) IN TERMS OF YOUR DEPARTMENT'S NEEDS FOR STANDARDS.

NUMBER (1 to 5)	EQUIPMENT ITEM
_____	Building Materials
_____	Institutional Equipment
_____	Police Station Design/Construction
_____	Institutional Furnishings
_____	Detention Center Design/Construction

List in the spaces below any important equipment items that you think should have been included in the Building Systems list above.

ADDITIONAL ITEMS

_____

_____

_____

_____

_____

Comments: _____

_____

_____

_____

III: ABOUT YOUR DEPARTMENT

In this section, you are asked to tell us something about your department and its activities. We want to know how the needs of various kinds of departments differ. No individual police departments will be identified in the report of this survey; but we do ask for the names of individuals who filled in the questionnaire so that we may know whom to call if there are questions about your answers.

1. Department name: _____

2. Address: _____
Street & Number

_____
City State ZIP Code

3. Phone: _____
Area Code & Number

4. Name of the person(s) who filled in this questionnaire:

Title/Rank _____ Name _____

Title/Rank _____ Name _____

Title/Rank _____ Name _____

5. About what size area is served by your department in square miles:

_____ Square Miles

6. What size population is served by your department:

Total population served _____

7. Political jurisdiction of your department: (MARK X BY ONE OF THE FOLLOWING)

_____ State
_____ County or Parish
_____ City
_____ Town
_____ Village
_____ Township
_____ Borough
_____ Other (Specify) _____

8. How many full time sworn officers are there in your department?

Number _____

9. How many part time officers are there in your department?

Number _____

10. Which of the following activities are normally handled in your OWN DEPARTMENT rather than by some other agency or group? (MARK X BY EACH ITEM THAT APPLIES)

___Custody or Detention of Less Than 24 Hours
___Custody or Detention of Less Than 1 Week
___Custody or Detention of 1 Year or Less
___Custody or Detention of More Than 1 Year
___Traffic Safety and Traffic Control
___Highway Patrol
___Vehicle Inspection
___Tests for Drivers' License
___Maintenance of Building Used Exclusively for Police Purposes
___Public Building Protection
___Service Function
___Emergency Aid and Rescue
___Underwater Recovery
___Harbor Patrol
___Police Communications for Own Department
___Communications for Other Law Enforcement Agency
___Police Training for Own Department
___Police Training for Other Law Enforcement Agency
___Bomb Disposal
___Polygraph
___Criminal Investigation
___Breath-Alcohol Tests
___Laboratory Analysis of Blood for Alcohol Content
___Narcotics Laboratory Analysis
___Crime Laboratory
___Serve Civil Process
___Serve Traffic and Criminal Warrants
___Enforce Tax Laws
___Coroner
___Animal Control (Dog Catcher)
___Other (Specify) _____

11. What was your approximate TOTAL budget for 1971? (Use either fiscal year 1971 or calendar year 1971, whichever you normally use.)

Approximate TOTAL Budget (1971): $_____

12. What was the approximate amount (in dollars) spent by your department in 1971 for each of the following:

Approximate Dollars Spent for EQUIPMENT: $_____

Approximate Dollars Spent for PERSONNEL: $_____

13. Would you like to receive a copy of the report on this survey?

_____Yes

_____No

THANK YOU for your help. LEAA believes the police deserve to have the best equipment possible. This is the first step towards improvement.

NOTES

APPENDIX B: SAMPLING CONSIDERATIONS

B.1 Description of the Population

The first problem encountered in developing the sample was the definition of the population. The population base consisted (in August 1971) of a file of roughly 14,000 law enforcement agencies. This file, maintained by the LEAA, contained the name, address and LEAA region for each listed police agency. In addition, each city was assigned a code which corresponded to one of three categories of numbers of full-time officers: 1-9 officers, 10-49 officers, or more than 50 officers.

The population was purposefully limited to police departments, as this group was regarded as the largest single class of law enforcement agencies with identifiable equipment needs. Even with this definition, extensive effort was required to remove from consideration such inappropriate agencies as: University police, county and district coroners, medical examiners, toll highway authorities, port authorities, marine police, tunnel police, motor vehicle registries, state capitol police, bridge authorities, park commissions, Departments of Natural Resources, Texas Rangers, airport police and training academies. These types of agencies were regarded as inappropriate, either because they did not primarily perform a law enforcement function, or because their functions were too specialized and would bias responses. Duplicate listings were also eliminated.

The police department population was stratified by the ten LEAA geographic regions and by seven department types as discussed below.

B.1.1 State Departments. If State Police was listed, then it was included as a member of the population. If several listings appeared under a common state organization, the Highway Patrol section was selected. (This was the case in five states.) Six states listed Highway Patrol and Investigative units, with no reference to a larger common organization. In these six cases, both were included in the population and when the questionnaires were returned, the one with wider range of law enforcement activities, as determined by their responses on p. A-18, Appendix A, was retained in the sample.

B.1.2 County Departments. County Departments were usually listed in the LEAA master file as sheriff's office. City sheriffs, also listed in this category on the file were excluded from the County Department category. County sheriffs were included in favor of county jails and county police (under the sheriff's office).

B.1.3 City Departments. Four types of departments were established for this category. First, the 50 largest cities by population (according to the 1970 census) were assigned their own stratum. The remaining cities were then stratified by the number of full-time officers: 1-9, 10-49, 50 or more. Departments for suburban areas or subdivisions (e.g. Cleveland Heights, East Detroit) were left in the population as they may or may not have been autonomous.

B.1.4 Townships. This class of jurisdiction has a special status in local government and appeared in only four of the LEAA regions (regions 1,2,3,5).

B.1.5 Summary. The final population consisted of 12,842 police departments, cross-stratified into 70 cells by LEAA regions (10) and types (7). The number of units in the population in each cell is given in Table 1.2-2 in the text, repeated here for the reader's convenience in Table B-1.

B.2 Sample Plan

It may readily be seen from Table B-1 that there was considerable variation in the number of departments from one cell to another. To send questionnaires to all 12,842 departments would have produced an unmanageable amount of data, from the point of view of both administration and analysis. With these two considerations in mind, it was apparent that the fraction of departments sampled in one region/type combination would differ from the fraction sampled in another, i.e. the stratified sample would have to be disproportionate. However, this was not simply a consequence of the way in which the population was distributed into the various cross-strata, as it was decided *a priori* to have a 100 percent sample for state departments and departments in the 50 largest cities, and that these departments would be sent the entire questionnaire package (the EPQ and 6 DQ's).

Two factors were used to determine the sample sizes in the remaining 44 cells. Firstly, an overall sample fraction of about 10 percent for these cells was felt to give sufficient representation and a manageable sample. Secondly, equal sample sizes for the 44 cells was regarded as the best alternative to proportional sampling, in view of the desirability of distributing the DQ's equally among cells (2 DQ's per department). Furthermore, this constant sample size was selected to be a multiple of six, so that each DQ could be sent to the same number of departments.

Table B-1. Number of Police Departments By Region and Type

DEPARTMENT TYPE	LEAA REGION 1	2	3	4	5	6	7	8	9	10	TOTAL
State	6	2	5	8	6	5	4	6	4	4	50*
County	66	84	257	764	536	506	413	288	103	120	3137
City (1-9 Officers)	27	348	713	979	1470	703	611	283	135	217	5486
City (10-49 Officers)	40	237	166	344	508	230	142	71	168	79	1985
City (50 or More Officers)	60	64	36	83	119	46	23	19	87	17	554
50 Largest Cities	1	4	5	8	10	8	3	1	8	2	50
Township	629	349	362	-	234	-	-	-	-	-	1574
TOTAL	829	1088	1544	2186	2883	1498	1196	668	505	439	12,836

* Questionnaires were actually sent to 56 State Police departments since there were 6 State Departments which listed two police agencies without reference to a common central agency. However, only one set of questionnaires was accepted from each of these 6 agencies.

Specifically, taking 10 percent of 12,736 (12,736 = 12,842 police departments - 50 largest cities - 56 different state departments) and dividing the result by 44 yielded 28.95. Therefore, a sample of 30 departments/cell (the nearest multiple of 6) was randomly selected. The four cells in which the population was less than 30 were sampled 100%. Note that but for these four exceptional cells, each DQ was sent to 10 departments (2 DQ's per department x 30 departments/6 DQ's), distributed randomly within each cell. For the four exceptional cells, 2 DQ's were sent to each department as well, but in only one of the four cases (region 1, cities with 1-9 officers) were the DQ's able to be sent in equal numbers (9 of each); in the remaining three cells, unequal numbers of DQ's had to be distributed. Those DQ's appearing more frequently were selected at random in these cases. The distribution of the sample selected appears in Table 1.2-3 and is duplicated here in Table B-2.

Table B-2 Sample of Police Departments by Region and Type

DEPARTMENT TYPE	REGION 1	2	3	4	5	6	7	8	9	10	TOTAL
State	6	2	5	9	7	6	5	7	5	4	50*
County	30	30	30	30	30	30	30	30	30	30	300
City (1-9 officers)	27	30	30	30	30	30	30	30	30	30	297
City (10-49 officers)	30	30	30	30	30	30	30	30	30	30	300
City (50 or more officers)	30	30	30	30	30	30	23	19	30	17	269
50 largest cities	1	4	5	8	10	8	3	1	8	2	50
Township	30	30	30		30						120
Total	154	156	160	137	167	134	121	117	133	113	1386

*Questionnaires were actually sent to 56 State Police departments since there were 6 State Departments which listed two police agencies without reference to a common central agency. However, only one set of questionnaires was accepted from each of these 6 agencies.

APPENDIX C: QUESTIONNAIRE ADMINISTRATION

C.1 General Procedure

The Police Equipment Survey was administered by the Technical Analysis Division, National Bureau of Standards. The questionnaires were mailed to police departments during the first week in June, 1972. The last questionnaires accepted for inclusion in this report were received the first week in January, 1973.

C.1.1 Preparation for Administration. When the sample was selected, each sample department was assigned a unique 7-digit identification number which coded Region, Department Type, department number, the detailed questionnaires assigned, and the version (see Section 1.4 of this report) of the EPQ assigned. An interactive, on-line computer file was established to record the status of the questionnaires, by identification code number, for each sample department.

Because pre-test interviews had shown that many police departments received 10-25 questionnaires per month, it was determined that special efforts would be required to insure priority handling of these questionnaires by the sample departments. To this end, one week prior to the questionnaire mailing, each sample department was mailed a personalized letter from Martin Danziger, Assistant Administrator, NILECJ, of LEAA, which explained the purposes of the survey and asked for the department's cooperation.

C.1.2 Administration. The first week of June, 1972, questionnaire packets were mailed to the 1386 sample departments. Each packet was addressed to the chief, or highest official of the department, and asked that he direct the questionnaires to the most appropriate persons in his department. In addition, the chief was asked to personally review his staff's answers if circumstances permitted. It was requested that the questionnaires be retained in the department until all could be mailed in the same self-return package.

C.1.3 Returned Questionnaires. As questionnaires were received at NBS, they were date stamped, recorded in the computer file, and distributed to specialized coding/editing teams (one for each questionnaire). As each questionnaire was processed, the computerized file was changed to indicate current status (e.g. coded, sent to keypunch, keypunched, etc.). Questionnaires which were incomplete or which had ambiguous (uncodable) answers were filed for telephone calls.

After coding and keypunching, all identifying information except for the 7-digit identification number was removed. This was done so that the original questionnaires could be made available to researchers (some indication of size and geographic location, for reference, would still be available via the identification number) without jeopardizing the anonymity of the department.

C.2 Follow-up Procedures

C.2.1 Mail Follow-up. The questionnaire packets were mailed during the first week of June, 1972. By July 1, approximately 40% of the packets had been returned. During the first two weeks in July, those departments

which had not returned their packets were identified from the computer file and were sent follow-up post cards. These self-return post cards asked for an indication of the status of that department's questionnaires:

(a) The questionnaires had not been received, and if so, a name to which to direct a new questionnaire packet; or

(b) The questionnaires were still being completed; or

(c) The questionnaires had been mailed back, but had not yet been received at NBS.

These post cards were mailed to about 800 sample departments. About 50% of those departments returned the post card. A tally of their answers was made:

TABLE C.2.1

Results of the Post Card Follow-Up

RESPONSE	APPROXIMATE % OF POST CARDS SENT
Questionnaires not received	13%
Still completing	25
Questionnaires already mailed	13
No answer	50

TOTAL NUMBER OF POST CARDS MAILED = 800

This post card follow-up appeared to have been responsible for a second surge in questionnaire returns.

C.2.2 Telephone Follow-up. Beginning in the middle of August, 1972, follow-up telephone calls were begun to departments which still had not returned the questionnaires, about 33% of the total sample. (Calls were also begun to departments whose returned questionnaires were incomplete

or ambiguous. The numbers of calls made for these two separate purposes were not tabulated separately in the computer record, so any numbers presented must apply to both.) These calls were continued throughout the fall of 1972. Almost 1000 departments (about 70% of the sample) were contacted at least once during this phase of the administration. More than 1300 telephone calls were made altogether.

The overwhelming majority of departments which received telephone calls from NBS were cooperative and helpful. In the few departments in which the recipient of the call was uncooperative, some of the common replies to the request for participation in the survey were that the officer was too busy to participate; that the department saw no reason for another survey; that the department did not believe in standards; or that they were not participating in any LEAA programs.

C.3 Rates of Return

Eighty-three percent (1153) of the sample departments participated in the survey. The differences in levels of participation among the department types may be seen in Table C.3-1 below. More than 90% of the States, the Fifty Largest Cities, and the Cities With 50 or More Officers returned questionnaires. The lowest levels of participation were in County and Township departments.

Table C.3-1. Response Rates by Department Type

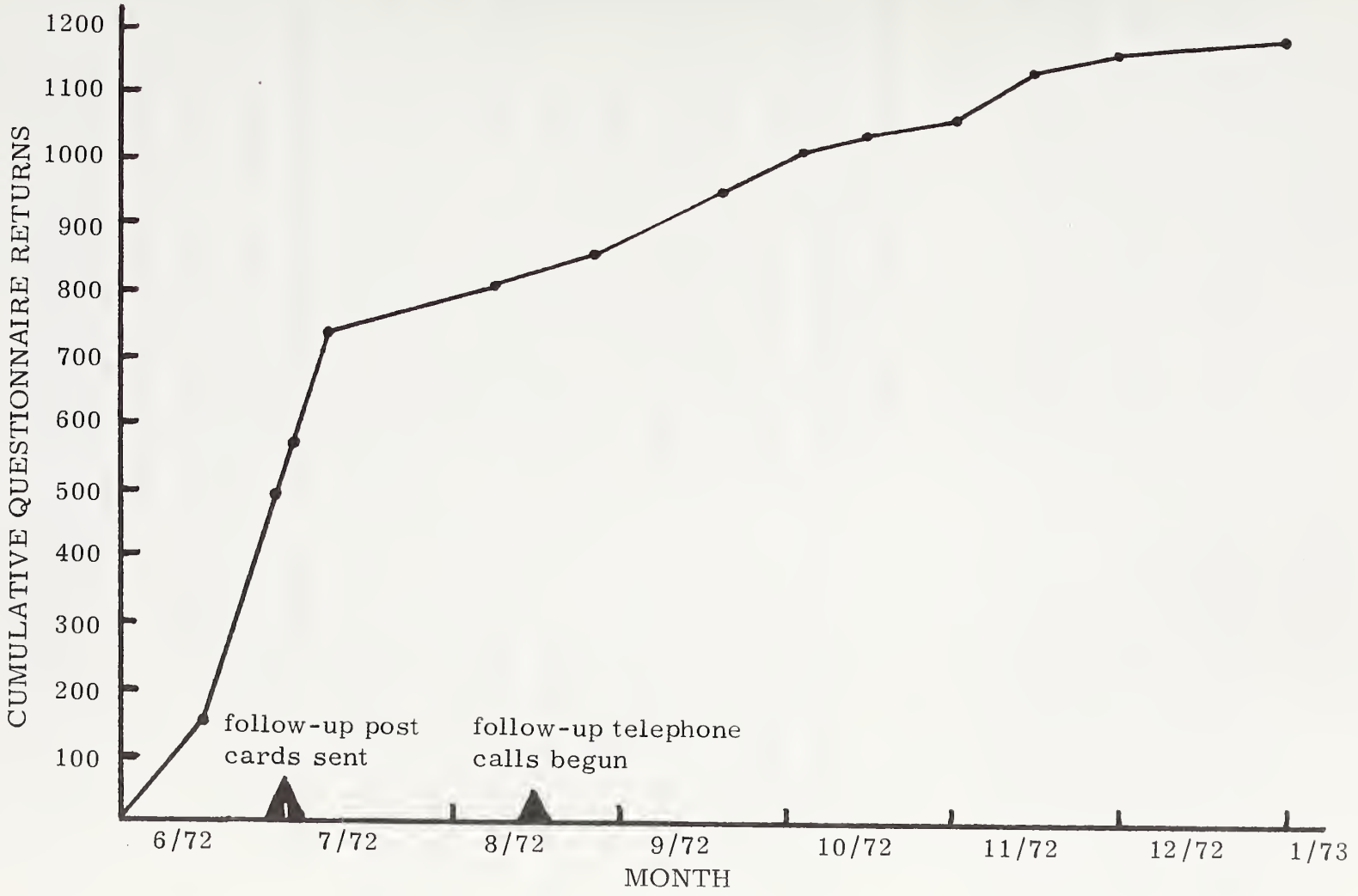
DEPARTMENT TYPE	NO. DEPTS. IN SAMPLE	NO. DEPTS. RETURN Qs.	% DEPTS. RETURN Qs.
State	50*	47	94%
City (50+)	269	244	91
50 Largest	50	46	90
City (10-49)	300	262	87
City (1-9)	297	238	80
County	300	225	75
Township	120	81	68

* On the LEAA master tape, two divisions of state police were sometimes listed for a single state with no reference to a common agency. In six cases it could not be determined in advance which of these groups (e.g. Highway Patrol, Detective Bureau) should receive the questionnaires. Thus, questionnaires were mailed to both divisions. If both sets were returned, the division with the greater number of police functions was chosen to represent the state. If only one set of questionnaires was returned, it was used.

A variety of reasons were given by departments which were unable to return the questionnaires. Many of the smaller departments reported that their departments had been consolidated so that some or all of their functions had been taken over by another police agency. Many other smaller departments said that they felt their answers would be of little value since they had so little equipment. One department reported that the courthouse had burned down so they no longer had any equipment, and several departments reported that the questionnaires were lost in the summer floods of 1972. Many of the non-participating departments, however, said during the telephone follow-ups that they would complete the questionnaires, so their subsequent non-responses can only be taken as a lack of interest and/or time.

Figure C.3-2. presents cumulative questionnaire returns by month. Milestones indicate the beginning of post card and telephone follow-ups.

Figure C.3-2. Cumulative Number of Equipment Priorities Questionnaires Returned.



APPENDIX D: DETAILS OF EPQ ANALYSIS

This appendix presents the mathematical rationale for the procedures used to analyze the data from the Equipment Priorities Questionnaire. The first section of this appendix presents the methods used to obtain composite rankings at various levels of aggregation. Statistical methods to determine the significance of agreement in rankings are discussed in the second section.

D.1 Determination of Composite Rankings

D.1.1 Selection of Ranking as the Task. The final form of the EPQ asked respondents to rank all entries in each list in order to establish priorities for developing equipment standards. Two alternatives to ranking the lists were considered for the EPQ, rating and partial ranking, but were rejected. A simple rating scheme, such as would have been required for this survey, tends to lack discrimination and to be inordinately sensitive to response biases. The other alternative, partial ranking in which respondents rank only top priority entries, results in a loss of information and yields data which are mathematically difficult to aggregate and describe.

D.1.2 Determination of Composite Rankings. As described in the text, four sets of composite rankings were determined for each list:

(a) A composite ranking for each Department Type;

(b) a composite ranking for each Region;

(c) a composite ranking for all Cities; and

(d) a National composite ranking for all departments.

The discussion below refers to one list in order to reduce the amount of notation required; the procedures were the same for each list. Briefly, composites were computed from scores which were made up of three elements: (1) The rank assigned to an entry transformed such that poorer ranked items received exponentially less importance than better ranked items;* (2) a weight that corresponded to the sampling ratio of the cell from which a department was selected; and (3) a weight that corresponded to the number of full time officers in a department.

The notation below is used for the discussion to follow:

r_{ijkm} = the rank assigned entry m by respondent k in departments of type i, region j (cell (i,j)),

r_{im} = the composite rank determined for department type i, of entry m,

r_{jm} = the composite rank determined for region j, of entry m,

r_{cm} = the composite rank for cities of entry m,

r_{m} = the national composite rank of entry m,

s_{im} = the score calculated for entry m in departments of type i,

s_{jm} = the score calculated for entry m in region j,

s_{cm} = the score calculated for entry m for cities,

s_{m} = the national score calculated for entry m,

---

* Mr. Marc Nerenstone of NILECJ first suggested and formulated this concept. His contribution is gratefully acknowledged.

w_{ijk} = the weight assigned to respondent k in department type i, region j, corresponding to the number of full-time officers in the department,

u_{ij} = the weight assigned to departments in cell (i,j) to account for unequal sampling fractions.*

The score of entry m, at any level of aggregation, was obtained by multiplying the weights (u_{ij} and w_{ijk}) by the constant 2, raised to the negative rank ($^{-r}{}_{ijkm}$). For example, entry m's score for respondents in Region 5 would be calculated from the following formula.

$$s_{5m} = \sum_{i} \sum_{k\varepsilon\,(i,5)} u_{i5} w_{i5k} 2^{-r_{i5m}} \qquad \text{D.1.2-1}$$

where the notation $k\varepsilon$ (i,5) imples that the inner sum is taken over respondent k in cell (i,5). These scores would then be ordered from highest to lowest to obtain composite rankings. Not dividing by the total weight does not affect the ranking of the scores since the total weight is constant for a given entry m.

For the cities, the formula for calculating the scores would be:

$$s_{cm} = \sum_{i=3}^{6} \sum_{j} \sum_{k\varepsilon\,(i,j)} u_{ij} w_{ijk} 2^{-r_{ijkm}} \qquad \text{D.1.2-2}$$

since Department Types i = 3, 4, 5 and 6 are, (in the coding employed), all city police departments.

It was implicitly assumed that the ranks r_{ijkm} were permutations of the intergers 1,2,...,M, where M was the number of entries in the list

* Departments were selected randomly within each cell. Since the cells had unequal sampling fractions, u_{ij} was needed to compensate for unequal probabilities of selection to the sample from cell to cell.

considered. However, some respondents either did not follow the questionnaire directions or felt that tied ranks reflected their true preferences. Adjustments were made in all cases in which something other than a permutation of the integers 1,2,...,M was assigned. The purpose of those adjustments was to give all respondents an equal <u>total</u> contribution to entry scores for any given list. To take an extreme example: If respondent k in Department Type i, Region j, were to assign $r_{ijkm} = 1$ for all m = 1,2,...,M; his <u>total</u> contribution to aggregate scores would be larger than that of a respondent assigning M distinct interger ranks. Three "error" cases and the ways in which they were adjusted are shown below.

<u>Case 1</u>. When ranks $m_1,...,m_t$ were not assigned and the other entries were assigned the remaining ranks up to M + t: In this case, the ranks were all shifted, preserving the rank orders, to the appropriate permutation of 1,...,M. It was assumed that the respondents were simply careless in assigning ranks.

<u>Case 2</u>. When ranks $m_1,...,m_t$ were not assigned and the other entries were assigned the remaining ranks, <u>but none higher than M</u>: In this case, it was assumed that the unranked entries would have received the poorest ranks. Thus, the entries ranked were shifted, preserving the rank orders, to the appropriate permutation of 1,2,...,M-t; and the unranked entries were considered <u>tied</u> for the places M-t+1, M-t+2,...,M.

Case 3. Tied ranks: It was necessary to adjust for tied ranks such that the total scores contributed would be equal to what they would have been if distinct ranks 1,2,...,M had been assigned. Suppose there were t entries tied for rank positions m,m+1,..., m+t-1: If M = 9, and three entries were ranked as some permutation of 1, 2, 3, 4, 4, 4, 7, 8, 9; then t = 3 and m = 4, (i.e., the three entries ranked 4 were tied at rank positions 4, 5, and 6). It would then be necessary to find $\bar{r}$ such that

$$t2^{-\bar{r}} = 2^{-m} + 2^{-(m+1)} + \ldots + 2^{-(m+t-1)} \qquad \text{D.1.2-3}$$

Thus

$$\begin{aligned} -\bar{r} &= \log_2 \left((2^{-m} + 2^{-(m+1)} + \ldots + 2^{-(m+t-1)}) / t \right) \\ &= \log_2 (2^{-m} + 2^{-(m+1)} + 2^{-(m+t-1)}) - \log_2 t \\ &= \log_2 \left(2^{-m} (1 + 2^{-1} + \ldots + 2^{-(t-1)}) \right) - \log_{2t}, \end{aligned}$$

D.1.2-4

from which it follows that

$$\bar{r} = \log_2 t = m - \log_2 (1 + 2^{-1} + \ldots + 2^{-(t+1)})$$

D.1.2-5

Again, for example

$$\begin{aligned} \bar{r} &= \log_2 3 + 4 - \log_2 (1 + 2 + 4) \\ &= 4 + \log_2 3 - \log_2 7 \approx 2.77. \end{aligned}$$

D.2 Statistical Agreement Among Rankings

The purpose of the statistical analysis was to determine the extent of agreement among rankings at the following level of aggregation:

(a) Respondents within each Department Type;

(b) Respondents within each LEAA Region;

(c) Composite rankings among the Department Types

(d) Composite rankings among the LEAA Regions.

Two statistical tests were made. Both used, as a basis for the statistics calculated, the simple rank sum, (i.e., the sum, over the group under consideration, of the ranks assigned). The negative exponential score used for calculating composites is not amenable to these statistical tests.

The first test was used to determine outlying (high or low) rank sums. Assuming that the rankings comprised a random sample from the set of all possible rankings (the null hypothesis for this test), a given distribution existed for the rank sums. The test identified entries having extremely low or high rank sums, according to this distribution. Those entries having rank sums which would have occurred only 5% of the time from randomly drawn rankings were singled out. Clearly, an entry would have to be ranked consistently high or low to be identified as an outlier. The distribution of rank sums for M entries ranked by L judges has been tabulated by Thompson and Willke (1963). They also give approximation formulas for large L.

The second test used the simple rank sums to calculate the Coefficient of Concordance, a statistic analogous to the variance in parametric methods. Given L rankings of M entries, the mean rank sum is $L(M + 1)/2$. The maximum sum of squared deviations from this mean occurs when all L rankings

are identical, in which case the rank sums would be L, 2L, ..., ML, and the sum of the squared deviations from this mean would be $L^2(M^3 - M)/12$. The minimum sum of squared deviations from the mean occurs when all rank sums equal the mean, in which case it is zero. If we let S denote the sum of squared deviations from the mean, then the statistic

$$W = 12S / (L^2(M^3 - M))$$

is normalized, taking values between 0 (no agreement) and 1 (complete agreement). Assuming that the rankings represent a random sample from the set of all rankings, the distribution of W may be obtained (see Kendall, 1948, for a description of this test). For the values of L in the present study, two approximations to the distribution of W were used:

(a) for $M > 7$, $L(M - 1)W$ is approximately distributed as Chi-square with $v = M - 1$ degrees of freedom.

(b) for $M \leq 7$, $(L-1)W / (1-W)$ is approximately distributed as F with $v_1 = M-1-(2/L)$ and $v_2 = (L-1)v_1$ degrees of freedom (Abramovitz & Stegun, 1964).

For case (b) above, v_1 and v_2 were taken to the nearest integer and for large v_1 and v_2, a normal approximation to F is used (see Abramovitz & Stegun, 1964, p. 947).

Under the assumption that the rankings were random, it was possible to calculate the probability of obtaining a value of W less than that actually obtained. The larger this probability, the greater the level of agreement (meaning the smaller the probability that the rankings were random). For example, a 97% level of agreement, in this context, meant

that the probability was only .03 that a value as large as that calculated for W occurred by chance.

For comparing sets of rankings, the rank correlation coefficient τ was used. This statistic takes values between -1 and +1, corresponding to complete disagreement (rankings are reverses of each other) and complete agreement. The rank correlation coefficient τ is a normalized version of the statistic S which is calculated as follows:

(a) Consider each pair of entries (for a list of M entries, there are $M(m-1)/2$ pairs).

(b) If both rankings have one of the pair preferred to the other, score +1.

(c) If the rankings have the pair in opposite order of preference, score -1.

(d) S equals the sum of scores in (b) and (c).

Since the range of values for S is $-M(M-1)/2$ to $M(M-1)/2$, $\tau = 2S/M(M-1)$ takes values between -1 and +1. For values of M between 4 and 10, probabilities for τ (or equivalently S) are tabulated (Kendall, 1948, Table 1). For $M > 10$, τ is approximately normal with mean zero, and variance $\sigma^2 = M(M-1)(2M+5)/18$.

For present purposes, the level of agreement between two rankings was the probability of not exceeding the calculated value of τ. This implies that only one tail of the distribution of τ was used, as there was no concern with levels of disagreement.

Consider the example in Table D.2-1.

TABLE D.2-1

Two Rankings of Five Entries

	A	B	C	D	E
Ranking I	3	5	1	2	4
Ranking II	1	4	2	5	3

For the pair AB, Ranking I prefers A to B, as does Ranking II. Thus, the score for AB is +1. On the other hand, Ranking I prefers D to E, but Ranking II prefers E to D. Thus, the score for the pair DE is -1. The ten scores in this example are:

AB: +1	BD: -1
AC: -1	BE: +1
AD: -1	CD: +1
AE: +1	CE: +1
BC: +1	DE: -1

and $S = 1-1-1+1+1-1+1+1+1-1 = 6-4 = 2.$

The probability that $S \geq 2$, from the Thompson and Willke (1963) table, is 0.408. Thus, the level of agreement between Rankings I and II is 59.2%.

There are shorter methods to calculating τ (or S) than that described in (a)-(d) above. See Thompson and Willke (1963), Chapter 1 for a description of these.

REFERENCES

(1) Abramovitz, M. and Stegun, T.A. (eds.), Handbook of Mathematical Functions (AMS 55), National Bureau of Standards, 1964.

(2) Kendall, M. G., Rank Correlation Methods, Charles Griffin and Company Limited, London, 1948.

(3) Thompson, W. A., Jr. and Willke, T.A., "On an Extreme Rank Sum Test for Outliers," Biometrika, Vol. 50, Nos. 3,4, 1963.

APPENDIX E

DATA TABLES

ANALYSIS FOR CATEGORIES

Table
I-1

NATIONAL RANKS

PROTECTIVE EQUIPMENT AND CLOTHING	3
COMMUNICATIONS EQUIPMENT AND SUPPLIES	1
WEAPONS,LETHAL AND RELATED AMMUNITION	4
WEAPONS,NON-LETHAL	5
VEHICLES	2
BUILDING SYSTEMS	8
EMERGENCY WARNING AND RESCUE EQUIPMENT	6
SECURITY EQUIPMENT	8
DETECTION SYSTEMS	7

Table
I-2

ITEMS WITH EXTREME RANK SUMS BY DEPARTMENT TYPE
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	STATE	COUNTY	CITY(1-9 OFFICERS)	CITY(10-49 OFFICERS)	CITY(50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
	186, 283	1018,1231	1080,1299	1194,1425	1108,1331	177, 272	340, 469
PROTECTIVE EQUIPMENT AND CLOTHING	****	****	****	****	****	****	****
COMMUNICATIONS EQUIPMENT AND SUPPLIES	116.	580.	654.	669.	563.	118.	219.
WEAPONS,LETHAL AND RELATED AMMUNITION	****	909.	983.	****	****	****	****
WEAPONS,NON-LETHAL	****	****	****	****	****	****	****
VEHICLES	107.	694.	639.	694.	694.	133.	227.
BUILDING SYSTEMS	346.	****	****	****	****	348.	577.
EMERGENCY WARNING AND RESCUE EQUIPMENT	181.	****	****	****	****	****	335.
SECURITY EQUIPMENT	351.	****	****	****	****	****	517.
DETECTION SYSTEMS	307.	****	****	****	****	****	554.

Table
I-3

THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 47 STATE DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 225 COUNTY DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 238 CITY(1-9 OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 262 CITY(10-49 OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 244 CITY(50 OR MORE OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 45 FIFTY LARGEST CITIES DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 81 TOWNSHIP DEPARTMENTS.

RANKS BY DEPARTMENT TYPE

	STATE	COUNTY	CITY(1-9 OFFICERS)	CITY(10-49 OFFICERS)	CITY(50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
PROTECTIVE EQUIPMENT AND CLOTHING	5	4	5	7	3	2	5
COMMUNICATIONS EQUIPMENT AND SUPPLIES	2	1	2	2	1	1	2
WEAPONS,LETHAL AND RELATED AMMUNITION	4	3	3	3	4	7	3
WEAPONS,NON-LETHAL	7	5	8	9	9	4	8
VEHICLES	1	2	1	1	2	3	1
BUILDING SYSTEMS	9	9	9	5	8	9	6
EMERGENCY WARNING AND RESCUE EQUIPMENT	3	7	4	4	6	8	4
SECURITY EQUIPMENT	8	6	7	6	5	6	7
DETECTION SYSTEMS	6	8	6	8	7	5	9

COMPOSITE RANKS FOR ALL CITIES

PROTECTIVE EQUIPMENT AND CLOTHING	3
COMMUNICATIONS EQUIPMENT AND SUPPLIES	1
WEAPONS,LETHAL AND RELATED AMMUNITION	5
WEAPONS,NON-LETHAL	4
VEHICLES	2
BUILDING SYSTEMS	9
EMERGENCY WARNING AND RESCUE EQUIPMENT	7
SECURITY EQUIPMENT	8
DETECTION SYSTEMS	6

Table
I-4

THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 116 DEPARTMENTS IN LEAA REGION 1
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 129 DEPARTMENTS IN LEAA REGION 2
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 128 DEPARTMENTS IN LEAA REGION 3
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 113 DEPARTMENTS IN LEAA REGION 4
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 136 DEPARTMENTS IN LEAA REGION 5
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 105 DEPARTMENTS IN LEAA REGION 6
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 100 DEPARTMENTS IN LEAA REGION 7
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 103 DEPARTMENTS IN LEAA REGION 8
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 117 DEPARTMENTS IN LEAA REGION 9
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 95 DEPARTMENTS IN LEAA REGION 10

RANKS BY LEAA REGION

	1	2	3	4	5	6	7	8	9	10
PROTECTIVE EQUIPMENT AND CLOTHING	4	1	3	4	6	6	6	4	3	4
COMMUNICATIONS EQUIPMENT AND SUPPLIES	2	2	2	2	1	1	2	2	1	1
WEAPONS, LETHAL AND RELATED AMMUNITION	3	7	5	3	4	3	3	5	4	6
WEAPONS, NON-LETHAL	7	4	8	8	3	8	5	7	5	7
VEHICLES	1	3	1	1	2	2	1	1	2	2
BUILDING SYSTEMS	5	9	6	9	9	7	8	6	9	9
EMERGENCY WARNING AND RESCUE EQUIPMENT	6	6	4	5	8	4	4	3	7	5
SECURITY EQUIPMENT	9	8	9	7	7	9	7	9	6	3
DETECTION SYSTEMS	8	5	7	6	5	5	9	8	8	8

Table
I-5

ITEMS WITH EXTREME RANK SUMS BY LEAA REGION
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	1 503, 656	2 564, 725	3 559, 720	4 489, 640	5 596, 763
PROTECTIVE EQUIPMENT AND CLOTHING	****	****	****	****	****
COMMUNICATIONS EQUIPMENT AND SUPPLIES	292.	364.	341.	297.	333.
WEAPONS,LETHAL AND RELATED AMMUNITION	****	****	****	473.	****
WEAPONS,NON-LETHAL	****	****	****	655.	784.
VEHICLES	325.	367.	422.	250.	366.
BUILDING SYSTEMS	809.	988.	890.	826.	942.
EMERGENCY WARNING AND RESCUE EQUIPMENT	****	****	****	****	****
SECURITY EQUIPMENT	710.	783.	761.	704.	781.
DETECTION SYSTEMS	764.	792.	808.	731.	880.

ITEMS WITH EXTREME RANK SUMS BY LEAA REGION
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	6 451, 598	7 428, 571	8 442, 587	9 507, 662	10 405, 544
PROTECTIVE EQUIPMENT AND CLOTHING	****	****	****	****	****
COMMUNICATIONS EQUIPMENT AND SUPPLIES	245.	203.	279.	328.	236.
WEAPONS,LETHAL AND RELATED AMMUNITION	****	****	426.	****	****
WEAPONS,NON-LETHAL	612.	580.	597.	****	552.
VEHICLES	305.	281.	281.	350.	240.
BUILDING SYSTEMS	711.	688.	715.	826.	686.
EMERGENCY WARNING AND RESCUE EQUIPMENT	****	****	****	****	****
SECURITY EQUIPMENT	611.	598.	616.	****	****
DETECTION SYSTEMS	635.	664.	658.	727.	554.

Table
I-6

REGARDING EACH REGION AS A RESPONDENT, IF THE TEN RANKINGS WERE RANDOM,
THE RANK SUM OF AN ITEM WOULD LIE IN THE INTERVAL (27, 73)
95 PERCENT OF THE TIME. THE FOLLOWING ITEMS LIE OUTSIDE THIS INTERVAL:

COMMUNICATIONS EQUIPMENT AND SUPPLIES	13.
VEHICLES	21.
BUILDING SYSTEMS	90.

REGARDING EACH LEAA REGION AS A RESPONDENT,
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL.

REGARDING EACH DEPARTMENT TYPE AS A RESPONDENT, IF THE SEVEN RANKINGS WERE RANDOM,
THE RANK SUM OF AN ITEM WOULD LIE IN THE INTERVAL (16, 54)
95 PERCENT OF THE TIME. THE FOLLOWING ITEMS LIE OUTSIDE THIS INTERVAL:

COMMUNICATIONS EQUIPMENT AND SUPPLIES	11.
VEHICLES	13.
BUILDING SYSTEMS	63.

REGARDING EACH DEPARTMENT TYPE AS A RESPONDENT,
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL.

Table
I-7

FREQUENCY DISTRIBUTION OF RANKS OF
CATEGORIES BY DEPARTMENT TYPE

CATEGORIES	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
EMERGENCY WARNING AND RESCUE EQUIPMENT																
RANK 1	1	2.1	9	4.0	22	9.2	9	3.4	2	.8	0	.0	3	3.7	46	4.0
RANK 2	7	14.9	17	7.6	19	8.0	20	7.6	14	5.7	1	2.2	14	17.3	92	8.1
RANK 3	15	31.9	54	24.0	44	18.5	39	14.9	43	17.6	8	17.8	19	23.5	222	19.4
RANK 4	10	21.3	27	12.0	39	16.4	51	19.5	44	18.0	2	4.4	15	18.5	188	16.5
RANK 5	7	14.9	33	14.7	31	13.0	42	16.0	29	11.9	5	11.1	10	12.3	157	13.7
RANK 6	3	6.4	35	15.6	37	15.5	40	15.3	44	18.0	7	15.6	10	12.3	176	15.4
RANK 7	2	4.3	30	13.3	22	9.2	22	8.4	20	8.2	13	28.9	3	3.7	112	9.8
RANK 8	1	2.1	12	5.3	12	5.0	26	9.9	35	14.3	7	15.6	5	6.2	98	8.6
RANK 9	0	.0	3	1.3	7	2.9	11	4.2	13	5.3	1	2.2	1	1.2	36	3.2
NOT RANKED	1	2.1	5	2.2	5	2.1	2	.8	0	.0	1	2.2	1	1.2	15	1.3
TIED WITH ONE OTHER ITEM	0	.0	1	.4	0	.0	0	.0	1	.4	0	.0	1	1.2	3	.3
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	6	2.5	0	.0	1	.4	0	.0	0	.0	9	.8
SECURITY EQUIPMENT																
RANK 1	0	.0	8	3.6	13	5.5	15	5.7	9	3.7	0	.0	5	6.2	50	4.4
RANK 2	0	.0	13	5.8	9	3.8	17	6.5	18	7.4	3	6.7	1	1.2	61	5.3
RANK 3	2	4.3	18	8.0	14	5.9	15	5.7	19	7.8	5	11.1	3	3.7	76	6.7
RANK 4	1	2.1	22	9.8	17	7.1	25	9.5	31	12.7	10	22.2	6	7.4	112	9.8
RANK 5	4	8.5	30	13.3	30	12.6	36	13.7	37	15.2	6	13.3	7	8.6	150	13.1
RANK 6	3	6.4	34	15.1	35	14.7	37	14.1	28	11.5	5	11.1	8	9.9	150	13.1
RANK 7	7	14.9	34	15.1	42	17.6	52	19.8	35	14.3	8	17.8	18	22.2	196	17.2
RANK 8	13	27.7	37	16.4	50	21.0	49	18.7	54	22.1	5	11.1	26	32.1	234	20.5
RANK 9	16	34.0	25	11.1	22	9.2	14	5.3	13	5.3	2	4.4	6	7.4	98	8.6
NOT RANKED	1	2.1	4	1.8	6	2.5	2	.8	0	.0	1	2.2	1	1.2	15	1.3
TIED WITH ONE OTHER ITEM	0	.0	1	.4	0	.0	2	.8	1	.4	0	.0	0	.0	4	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	6	2.5	0	.0	2	.8	0	.0	0	.0	10	.9
DETECTION SYSTEMS																
RANK 1	4	8.5	5	2.2	9	3.8	10	3.8	7	2.9	0	.0	1	1.2	36	3.2
RANK 2	1	2.1	7	3.1	9	3.8	8	3.1	11	4.5	3	6.7	5	6.2	44	3.9
RANK 3	5	10.6	9	4.0	10	4.2	21	8.0	24	9.8	8	17.8	0	.0	77	6.7
RANK 4	0	.0	19	8.4	18	7.6	24	9.2	19	7.8	6	13.3	2	2.5	88	7.7
RANK 5	1	2.1	30	13.3	28	11.8	24	9.2	30	12.3	6	13.3	8	9.9	127	11.1
RANK 6	2	4.3	34	15.1	22	9.2	30	11.5	25	10.2	7	15.6	10	12.3	130	11.4
RANK 7	11	23.4	33	14.7	30	12.6	41	15.6	46	18.9	6	13.3	19	23.5	186	16.3
RANK 8	15	31.9	49	21.8	60	25.2	64	24.4	49	20.1	7	15.6	19	23.5	263	23.0
RANK 9	8	17.0	34	15.1	45	18.9	38	14.5	33	13.5	2	4.4	16	19.8	176	15.4
NOT RANKED	0	.0	5	2.2	7	2.9	2	.8	0	.0	0	.0	1	1.2	15	1.3
TIED WITH ONE OTHER ITEM	0	.0	1	.4	1	.4	0	.0	0	.0	0	.0	0	.0	2	.2
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	6	2.5	0	.0	2	.8	0	.0	0	.0	10	.9

Table

I-7 cont.

FREQUENCY DISTRIBUTION OF RANKS OF
CATEGORIES BY DEPARTMENT TYPE

CATEGORIES	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
WEAPONS, NON-LETHAL																
RANK 1	0	.0	7	3.1	4	1.7	5	1.9	6	2.5	1	2.2	0	.0	23	2.0
RANK 2	1	2.1	15	6.7	11	4.6	6	2.3	12	4.9	5	11.1	2	2.5	52	4.6
RANK 3	1	2.1	20	8.9	20	8.4	22	8.4	17	7.0	6	13.3	10	12.3	96	8.4
RANK 4	8	17.0	40	17.8	43	18.1	35	13.4	30	12.3	8	17.8	6	7.4	170	14.9
RANK 5	10	21.3	30	13.3	44	18.5	43	16.4	46	18.9	9	20.0	22	27.2	204	17.9
RANK 6	12	25.5	32	14.2	31	13.0	50	19.1	44	18.0	5	11.1	14	17.3	188	16.5
RANK 7	9	19.1	29	12.9	34	14.3	34	13.0	31	12.7	4	8.9	15	18.5	156	13.7
RANK 8	3	6.4	32	14.2	20	8.4	39	14.9	28	11.5	4	8.9	8	9.9	134	11.7
RANK 9	2	4.3	16	7.1	24	10.1	27	10.3	28	11.5	2	4.4	3	3.7	102	8.9
NOT RANKED	1	2.1	4	1.8	7	2.9	1	.4	2	.8	1	2.2	1	1.2	17	1.5
TIED WITH ONE OTHER ITEM	0	.0	1	.4	2	.8	0	.0	0	.0	0	.0	1	1.2	4	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	5	2.1	0	.0	2	.8	0	.0	0	.0	9	.8
VEHICLES																
RANK 1	27	57.4	82	36.4	93	39.1	98	37.4	89	36.5	18	40.0	34	42.0	441	38.6
RANK 2	7	14.9	45	20.0	55	23.1	67	25.6	62	25.4	10	22.2	15	18.5	261	22.9
RANK 3	4	8.5	26	11.6	41	17.2	33	12.6	26	10.7	4	8.9	9	11.1	143	12.5
RANK 4	2	4.3	14	6.2	9	3.8	21	8.0	20	8.2	2	4.4	8	9.9	76	6.7
RANK 5	1	2.1	11	4.9	10	4.2	13	5.0	11	4.5	2	4.4	3	3.7	51	4.5
RANK 6	2	4.3	20	8.9	6	2.5	9	3.4	9	3.7	3	6.7	3	3.7	52	4.6
RANK 7	1	2.1	6	2.7	9	3.8	10	3.8	8	3.3	2	4.4	3	3.7	39	3.4
RANK 8	2	4.3	9	4.0	10	4.2	2	.8	12	4.9	3	6.7	4	4.9	42	3.7
RANK 9	0	.0	9	4.0	2	.8	7	2.7	5	2.0	1	2.2	2	2.5	26	2.3
NOT RANKED	1	2.1	3	1.3	3	1.3	2	.8	2	.8	0	.0	0	.0	11	1.0
TIED WITH ONE OTHER ITEM	0	.0	3	1.3	1	.4	0	.0	0	.0	0	.0	0	.0	4	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	4	1.7	0	.0	2	.8	0	.0	0	.0	9	.8
BUILDING SYSTEMS																
RANK 1	0	.0	7	3.1	10	4.2	21	8.0	18	7.4	2	4.4	3	3.7	61	5.3
RANK 2	1	2.1	11	4.9	13	5.5	17	6.5	11	4.5	1	2.2	4	4.9	58	5.1
RANK 3	1	2.1	5	2.2	6	2.5	10	3.8	17	7.0	1	2.2	2	2.5	42	3.7
RANK 4	2	4.3	12	5.3	7	2.9	12	4.6	8	3.3	1	2.2	6	7.4	48	4.2
RANK 5	2	4.3	14	6.2	8	3.4	10	3.8	9	3.7	0	.0	5	6.2	48	4.2
RANK 6	4	8.5	13	5.8	18	7.6	16	6.1	12	4.9	2	4.4	6	7.4	71	6.2
RANK 7	13	27.7	25	11.1	33	13.9	26	9.9	23	9.4	4	8.9	4	4.9	128	11.2
RANK 8	5	10.6	24	10.7	29	12.2	26	9.9	21	8.6	6	13.3	9	11.1	120	10.5
RANK 9	17	36.2	109	48.4	107	45.0	121	46.2	123	50.4	26	57.8	41	50.6	544	47.6
NOT RANKED	2	4.3	5	2.2	7	2.9	3	1.1	2	.8	2	4.4	1	1.2	22	1.9
TIED WITH ONE OTHER ITEM	0	.0	1	.4	1	.4	0	.0	1	.4	0	.0	0	.0	3	.3
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	5	2.1	0	.0	2	.8	0	.0	0	.0	9	.8

Table
I-7 cont.

FREQUENCY DISTRIBUTION OF RANKS OF
CATEGORIES BY DEPARTMENT TYPE

CATEGORIES	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
PROTECTIVE EQUIPMENT AND CLOTHING																
RANK 1	2	4.3	14	6.2	14	5.9	5	1.9	19	7.8	3	6.7	4	4.9	61	5.3
RANK 2	2	4.3	13	5.8	12	5.0	16	6.1	13	5.3	6	13.3	7	8.6	69	6.0
RANK 3	5	10.6	15	6.7	12	5.0	27	10.3	23	9.4	8	17.8	10	12.3	100	8.8
RANK 4	8	17.0	26	11.6	30	12.6	31	11.8	33	13.5	7	15.6	18	22.2	153	13.4
RANK 5	12	25.5	26	11.6	35	14.7	51	19.5	44	18.0	9	20.0	15	18.5	192	16.8
RANK 6	12	25.5	32	14.2	50	21.0	43	16.4	43	17.6	6	13.3	10	12.3	196	17.2
RANK 7	3	6.4	35	15.6	33	13.9	38	14.5	37	15.2	3	6.7	9	11.1	158	13.8
RANK 8	2	4.3	36	16.0	24	10.1	22	8.4	18	7.4	3	6.7	4	4.9	109	9.5
RANK 9	1	2.1	24	10.7	21	8.8	25	9.5	14	5.7	0	.0	4	4.9	89	7.8
NOT RANKED	0	.0	4	1.8	7	2.9	4	1.5	0	.0	0	.0	0	.0	15	1.3
TIED WITH ONE OTHER ITEM	0	.0	0	.0	1	.4	0	.0	0	.0	0	.0	0	.0	1	.1
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	6	2.5	0	.0	2	.8	0	.0	0	.0	11	1.0
COMMUNICATIONS EQUIPMENT AND SUPPLIES																
RANK 1	9	19.1	82	36.4	72	30.3	86	32.8	86	35.2	19	42.2	26	32.1	380	33.3
RANK 2	22	46.8	62	27.6	75	31.5	84	32.1	88	36.1	13	28.9	23	28.4	367	32.1
RANK 3	7	14.9	28	12.4	32	13.4	35	13.4	32	13.1	3	6.7	12	14.8	149	13.0
RANK 4	5	10.6	20	8.9	20	8.4	21	8.0	16	6.6	1	2.2	6	7.4	89	7.8
RANK 5	2	4.3	10	4.4	14	5.9	14	5.3	9	3.7	3	6.7	4	4.9	56	4.9
RANK 6	2	4.3	9	4.0	10	4.2	7	2.7	2	.8	1	2.2	6	7.4	37	3.2
RANK 7	0	.0	5	2.2	4	1.7	7	2.7	7	2.9	1	2.2	2	2.5	26	2.3
RANK 8	0	.0	6	2.7	4	1.7	4	1.5	2	.8	1	2.2	1	1.2	18	1.6
RANK 9	0	.0	2	.9	5	2.1	3	1.1	2	.8	1	2.2	1	1.2	14	1.2
NOT RANKED	0	.0	1	.4	2	.8	1	.4	0	.0	2	4.4	0	.0	6	.5
TIED WITH ONE OTHER ITEM	0	.0	2	.9	1	.4	2	.8	1	.4	0	.0	0	.0	6	.5
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	5	2.1	0	.0	1	.4	0	.0	0	.0	8	.7
WEAPONS, LETHAL AND RELATED AMMUNITION																
RANK 1	4	8.5	16	7.1	19	8.0	13	5.0	11	4.5	2	4.4	5	6.2	70	6.1
RANK 2	6	12.8	42	18.7	41	17.2	25	9.5	19	7.8	3	6.7	10	12.3	146	12.8
RANK 3	7	14.9	45	20.0	51	21.4	59	22.5	41	16.8	2	4.4	16	19.8	221	19.4
RANK 4	10	21.3	40	17.8	45	18.9	39	14.9	40	16.4	8	17.8	13	16.0	195	17.1
RANK 5	7	14.9	33	14.7	26	10.9	27	10.3	27	11.1	5	11.1	6	7.4	131	11.5
RANK 6	6	12.8	11	4.9	15	6.3	28	10.7	34	13.9	8	17.8	14	17.3	116	10.2
RANK 7	0	.0	20	8.9	15	6.3	30	11.5	33	13.5	2	4.4	6	7.4	106	9.3
RANK 8	5	10.6	11	4.9	14	5.9	27	10.3	22	9.0	7	15.6	4	4.9	90	7.9
RANK 9	1	2.1	4	1.8	11	4.6	13	5.0	16	6.6	8	17.8	6	7.4	59	5.2
NOT RANKED	1	2.1	3	1.3	1	.4	1	.4	1	.4	0	.0	1	1.2	8	.7
TIED WITH ONE OTHER ITEM	0	.0	2	.9	1	.4	0	.0	0	.0	0	.0	0	.0	3	.3
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	5	2.1	0	.0	1	.4	0	.0	0	.0	9	.8

Table
I-7 cont.

CATEGORY	NUMBER ONE RANK		HIGHEST PRIORITY CATEGORY REASON FOR NUMBER ONE RANK													
			1		2		3		4		5		6		7		8	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
PROTECTIVE EQUIPMENT AND CLOTHING	60	5.3	4	6.7	19	31.7	11	18.3	2	3.3	8	13.3	37	61.7	28	46.7	5	8.3
COMMUNICATIONS EQUIPMENT AND SUPPLIES	375	32.8	68	18.1	159	42.4	79	21.1	96	25.6	58	15.5	119	31.7	126	33.6	25	6.7
WEAPONS,LETHAL AND RELATED AMMUNITION	65	5.7	14	21.5	25	38.5	9	13.8	9	13.8	11	16.9	22	33.8	24	36.9	5	7.7
WEAPONS,NON-LETHAL	20	1.8	2	10.0	6	30.0	5	25.0	0	.0	0	.0	11	55.0	13	65.0	2	10.0
VEHICLES	441	38.6	28	6.3	126	28.6	101	22.9	251	56.9	57	12.9	139	31.5	129	29.3	29	6.6
BUILDING SYSTEMS	56	4.9	1	1.8	33	58.9	16	28.6	20	35.7	5	8.9	5	8.9	12	21.4	13	23.2
EMERGENCY WARNING AND RESCUE EQUIPMENT	42	3.7	4	9.5	14	33.3	8	19.0	11	26.2	12	28.6	16	38.1	15	35.7	2	4.8
SECURITY EQUIPMENT	50	4.4	3	6.0	28	56.0	9	18.0	8	16.0	5	10.0	12	24.0	26	52.0	2	4.0
DETECTION SYSTEMS	33	2.9	4	12.1	15	45.5	7	21.2	3	9.1	2	6.1	9	27.3	15	45.5	5	15.2
TOTAL			128	11.2	425	37.2	245	21.5	400	35.0	158	13.8	370	32.4	388	34.0	88	7.7

KEY TO REASONS

1 MOST OF THIS KIND OF EQUIPMENT IS NOW MADE BY ONE OR TWO FIRMS. STANDARDS MIGHT ENCOURAGE OTHERS TO START MAKING IT.
2 WE PLAN TO BUY THIS KIND OF EQUIPMENT IN THE NEAR FUTURE. STANDARDS WOULD HELP US TO SELECT THE BEST EQUIPMENT AT THE LEAST COST.
3 MUCH OF THE EQUIPMENT WE NOW HAVE OF THIS KIND DOES NOT REALLY MEET OUR NEEDS. STANDARDS COULD BE USED TO GUIDE THE MANUFACTURERS WHO DEVELOP EQUIPMENT.
4 WE NOW HAVE MAINTENANCE AND REPAIR PROBLEMS WITH MUCH OF THIS KIND OF EQUIPMENT. STANDARDS MIGHT SOLVE THESE PROBLEMS.
5 WE BUY EQUIPMENT IN THIS CATEGORY FROM SEVERAL DIFFERENT MAKERS AND FIND THAT PARTS AND COMPONENTS CANNOT BE INTERCHANGED AMONG THE DIFFERENT BRANDS. STANDARDS MIGHT HELP SOLVE THIS PROBLEM.
6 WHEN WE BUY EQUIPMENT IN THIS CATEGORY, WE MUST COMPARE MANY DIFFERENT BRANDS. IF THERE WERE STANDARDS, WE COULD STOP A LOT OF THIS INVESTIGATION AND/OR TESTING.
7 WE ARE NOT ABLE TO TEST THIS TYPE OF EQUIPMENT. IF THERE WERE STANDARDS, WE COULD USE THE RESULTS OF TESTS MADE BY THE LABORATORY.
8 OTHER

Table
II A-1

NATIONAL RANKS

TELE-PRINTER COMMUNICATIONS	8
SCRAMBLERS	5
REPEATER TRANSCEIVERS	7
HAND-HELD TRANSCEIVERS	3
CAR LOCATERS	6
HELMET WITH BUILT-IN TRANSCEIVING CAPACITY	9
BASE RADIO TRANSCEIVER	2
MOBILE TRANSCEIVERS	1
DIGITAL DATA COMMUNICATIONS	4

Table
II A-2

ITEMS WITH EXTREME RANK SUMS BY DEPARTMENT TYPE
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	STATE	COUNTY	CITY(1-9 OFFICERS)	CITY(10-49 OFFICERS)	CITY(50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
	186, 283	979,1190	1056,1273	1185,1414	1094,1315	172, 267	331, 458
TELE-PRINTER COMMUNICATIONS	290.	****	****	****	****	****	****
SCRAMBLERS	****	****	****	****	****	****	322.
REPEATER TRANSCEIVERS	****	****	****	****	****	****	471.
HAND-HELD TRANSCEIVERS	152.	832.	818.	883.	828.	138.	289.
CAR LOCATERS	302.	****	****	****	****	****	****
HELMET WITH BUILT-IN TRANSCEIVING CAPACITY	340.	****	****	****	****	323.	558.
BASE RADIO TRANSCEIVER	146.	765.	722.	789.	941.	****	257.
MOBILE TRANSCEIVERS	112.	694.	634.	773.	861.	160.	229.
DIGITAL DATA COMMUNICATIONS	303.	****	****	****	****	****	541.

Table
II A-3

THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 47 STATE DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 217 COUNTY DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 233 CITY(1-9 OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 260 CITY(10-49 OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 241 CITY(50 OR MORE OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 44 FIFTY LARGEST CITIES DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 79 TOWNSHIP DEPARTMENTS.

RANKS BY DEPARTMENT TYPE

	STATE	COUNTY	CITY(1-9 OFFICERS)	CITY(10-49 OFFICERS)	CITY(50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
TELE-PRINTER COMMUNICATIONS	8	7	5	5	8	6	5
SCRAMBLERS	7	4	4	4	4	8	4
REPEATER TRANSCEIVERS	4	8	6	6	6	7	6
HAND-HELD TRANSCEIVERS	3	1	3	3	1	3	3
CAR LOCATERS	6	6	7	7	5	5	7
HELMET WITH BUILT-IN TRANSCEIVING CAPACITY	9	9	8	9	9	9	9
BASE RADIO TRANSCEIVER	2	5	1	1	2	2	2
MOBILE TRANSCEIVERS	1	3	2	2	3	1	1
DIGITAL DATA COMMUNICATIONS	5	2	9	8	7	4	8

COMPOSITE RANKS FOR ALL CITIES

TELE-PRINTER COMMUNICATIONS	7
SCRAMBLERS	4
REPEATER TRANSCEIVERS	8
HAND-HELD TRANSCEIVERS	3
CAR LOCATERS	6
HELMET WITH BUILT-IN TRANSCEIVING CAPACITY	9
BASE RADIO TRANSCEIVER	2
MOBILE TRANSCEIVERS	1
DIGITAL DATA COMMUNICATIONS	5

Table

II A-4

THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 113 DEPARTMENTS IN LEAA REGION 1
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 120 DEPARTMENTS IN LEAA REGION 2
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 125 DEPARTMENTS IN LEAA REGION 3
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 113 DEPARTMENTS IN LEAA REGION 4
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 132 DEPARTMENTS IN LEAA REGION 5
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 102 DEPARTMENTS IN LEAA REGION 6
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 99 DEPARTMENTS IN LEAA REGION 7
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 99 DEPARTMENTS IN LEAA REGION 8
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 115 DEPARTMENTS IN LEAA REGION 9
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 95 DEPARTMENTS IN LEAA REGION 10

RANKS BY LEAA REGION

	1	2	3	4	5	6	7	8	9	10
TELE-PRINTER COMMUNICATIONS	6	6	5	6	6	7	7	7	6	8
SCRAMBLERS	4	7	4	4	4	4	6	5	8	5
REPEATER TRANSCEIVERS	5	5	6	7	8	5	8	4	7	4
HAND-HELD TRANSCEIVERS	1	3	2	3	1	3	5	2	3	1
CAR LOCATERS	8	8	7	5	7	6	4	6	4	7
HELMET WITH BUILT-IN TRANSCEIVING CAPACITY	9	9	9	9	9	9	9	9	9	9
BASE RADIO TRANSCEIVER	3	1	3	2	3	2	2	3	5	3
MOBILE TRANSCEIVERS	2	2	1	1	2	1	1	1	2	2
DIGITAL DATA COMMUNICATIONS	7	4	8	8	5	9	3	8	1	6

Table
II A-5

ITEMS WITH EXTREME RANK SUMS BY LEAA REGION
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	1 484, 635	2 564, 725	3 545, 704	4 489, 640	5 578, 741
TELE-PRINTER COMMUNICATIONS	****	783.	****	662.	****
SCRAMBLERS	417.	****	492.	****	****
REPEATER TRANSCEIVERS	****	763.	727.	****	766.
HAND-HELD TRANSCEIVERS	389.	462.	387.	430.	451.
CAR LOCATERS	657.	762.	726.	****	783.
HELMET WITH BUILT-IN TRANSCEIVING CAPACITY	831.	889.	904.	798.	976.
BASE RADIO TRANSCEIVER	371.	385.	465.	372.	427.
MOBILE TRANSCEIVERS	363.	328.	394.	345.	448.
DIGITAL DATA COMMUNICATIONS	759.	846.	830.	735.	786.

ITEMS WITH EXTREME RANK SUMS BY LEAA REGION
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	6 437, 582	7 424, 565	8 424, 565	9 498, 651	10 405, 544
TELE-PRINTER COMMUNICATIONS	595.	****	591.	****	****
SCRAMBLERS	419.	****	****	****	****
REPEATER TRANSCEIVERS	****	570.	****	****	****
HAND-HELD TRANSCEIVERS	384.	392.	317.	404.	322.
CAR LOCATERS	****	****	583.	****	569.
HELMET WITH BUILT-IN TRANSCEIVING CAPACITY	756.	714.	690.	794.	680.
BASE RADIO TRANSCEIVER	352.	320.	325.	****	321.
MOBILE TRANSCEIVERS	314.	304.	283.	400.	284.
DIGITAL DATA COMMUNICATIONS	705.	623.	637.	676.	637.

Table
II A-6

REGARDING EACH DEPARTMENT TYPE AS A RESPONDENT, IF THE SEVEN RANKINGS WERE RANDOM,
THE RANK SUM OF AN ITEM WOULD LIE IN THE INTERVAL (16, 54)
95 PERCENT OF THE TIME. THE FOLLOWING ITEMS LIE OUTSIDE THIS INTERVAL:

HAND-HELD TRANSCEIVERS	14.
HELMET WITH BUILT-IN TRANSCEIVING CAPACITY	62.
MOBILE TRANSCEIVERS	12.

REGARDING EACH DEPARTMENT TYPE AS A RESPONDENT,
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0004 PERCENT LEVEL.

REGARDING EACH REGION AS A RESPONDENT, IF THE TEN RANKINGS WERE RANDOM,
THE RANK SUM OF AN ITEM WOULD LIE IN THE INTERVAL (27, 73)
95 PERCENT OF THE TIME. THE FOLLOWING ITEMS LIE OUTSIDE THIS INTERVAL:

HAND-HELD TRANSCEIVERS	19.
HELMET WITH BUILT-IN TRANSCEIVING CAPACITY	89.
MOBILE TRANSCEIVERS	18.

REGARDING EACH LEAA REGION AS A RESPONDENT,
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL.

Table
II A-7

FREQUENCY DISTRIBUTION OF RANKS OF
COMMUNICATIONS EQUIPMENT AND SUPPLIES BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
TELE-PRINTER COMMUNICATIONS																
RANK 1	1	2.1	11	4.9	8	3.4	12	4.6	8	3.3	3	6.7	6	7.4	49	4.3
RANK 2	2	4.3	16	7.1	16	6.7	15	5.7	23	9.4	3	6.7	3	3.7	78	6.8
RANK 3	2	4.3	17	7.6	12	5.0	15	5.7	18	7.4	1	2.2	4	4.9	69	6.0
RANK 4	4	8.5	12	5.3	29	12.2	32	12.2	23	9.4	5	11.1	9	11.1	114	10.0
RANK 5	6	12.8	38	16.9	50	21.0	33	12.6	30	12.3	6	13.3	11	13.6	174	15.2
RANK 6	7	14.9	24	10.7	26	10.9	40	15.3	36	14.8	12	26.7	12	14.8	157	13.7
RANK 7	11	23.4	27	12.0	26	10.9	43	16.4	38	15.6	5	11.1	13	16.0	163	14.3
RANK 8	7	14.9	35	15.6	25	10.5	36	13.7	40	16.4	5	11.1	10	12.3	158	13.8
RANK 9	3	6.4	24	10.7	29	12.2	25	9.5	21	8.6	4	8.9	6	7.4	112	9.8
NOT RANKED	4	8.5	21	9.3	17	7.1	11	4.2	7	2.9	1	2.2	7	8.6	68	6.0
TIED WITH ONE OTHER ITEM	0	.0	4	1.8	1	.4	0	.0	1	.4	0	.0	0	.0	6	.5
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	1	.4	4	1.7	2	.8	1	.4	0	.0	1	1.2	9	.8
SCRAMBLERS																
RANK 1	0	.0	38	16.9	39	16.4	57	21.8	40	16.4	1	2.2	12	14.8	187	16.4
RANK 2	3	6.4	9	4.0	16	6.7	15	5.7	20	8.2	2	4.4	10	12.3	75	6.6
RANK 3	4	8.5	25	11.1	24	10.1	25	9.5	30	12.3	7	15.6	11	13.6	126	11.0
RANK 4	6	12.8	33	14.7	52	21.8	62	23.7	47	19.3	5	11.1	13	16.0	218	19.1
RANK 5	6	12.8	30	13.3	30	12.6	44	16.8	34	13.9	5	11.1	10	12.3	159	13.9
RANK 6	8	17.0	25	11.1	22	9.2	19	7.3	27	11.1	4	8.9	11	13.6	116	10.2
RANK 7	4	8.5	19	8.4	13	5.5	11	4.2	15	6.1	7	15.6	2	2.5	71	6.2
RANK 8	9	19.1	14	6.2	19	8.0	13	5.0	14	5.7	8	17.8	2	2.5	79	6.9
RANK 9	6	12.8	13	5.8	10	4.2	7	2.7	11	4.5	5	11.1	2	2.5	54	4.7
NOT RANKED	1	2.1	19	8.4	13	5.5	9	3.4	6	2.5	1	2.2	8	9.9	57	5.0
TIED WITH ONE OTHER ITEM	0	.0	1	.4	1	.4	0	.0	0	.0	1	2.2	0	.0	3	.3
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	1	.4	4	1.7	3	1.1	2	.8	0	.0	1	1.2	11	1.0
REPEATER TRANSCEIVERS																
RANK 1	5	10.6	12	5.3	7	2.9	10	3.8	13	5.3	1	2.2	4	4.9	52	4.6
RANK 2	3	6.4	18	8.0	4	1.7	13	5.0	19	7.8	3	6.7	3	3.7	63	5.5
RANK 3	10	21.3	23	10.2	18	7.6	13	5.0	28	11.5	6	13.3	4	4.9	102	8.9
RANK 4	14	29.8	34	15.1	26	10.9	40	15.3	50	20.5	10	22.2	6	7.4	180	15.8
RANK 5	9	19.1	29	12.9	41	17.2	31	11.8	20	8.2	7	15.6	14	17.3	151	13.2
RANK 6	2	4.3	37	16.4	35	14.7	38	14.5	24	9.8	2	4.4	12	14.8	150	13.1
RANK 7	1	2.1	26	11.6	29	12.2	36	13.7	19	7.8	2	4.4	8	9.9	121	10.6
RANK 8	2	4.3	10	4.4	24	10.1	39	14.9	25	10.2	7	15.6	9	11.1	116	10.2
RANK 9	1	2.1	15	6.7	34	14.3	30	11.5	36	14.8	6	13.3	12	14.8	134	11.7
NOT RANKED	0	.0	21	9.3	20	8.4	12	4.6	10	4.1	1	2.2	9	11.1	73	6.4
TIED WITH ONE OTHER ITEM	0	.0	4	1.8	1	.4	1	.4	3	1.2	0	.0	0	.0	9	.8
TIED WITH MORE THAN ONE OTHER ITEM	1	2.1	0	.0	4	1.7	2	.8	1	.4	0	.0	0	.0	8	.7

Table
II A-7 cont.

FREQUENCY DISTRIBUTION OF RANKS OF
COMMUNICATIONS EQUIPMENT AND SUPPLIES BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
HAND-HELD TRANSCEIVERS																
RANK 1	12	25.5	28	12.4	31	13.0	33	12.6	43	17.6	12	26.7	7	8.6	166	14.5
RANK 2	5	10.6	22	9.8	35	14.7	35	13.4	38	15.6	10	22.2	15	18.5	160	14.0
RANK 3	12	25.5	64	28.4	84	35.3	112	42.7	75	30.7	7	15.6	26	32.1	380	33.3
RANK 4	9	19.1	40	17.8	27	11.3	32	12.2	23	9.4	6	13.3	12	14.8	149	13.0
RANK 5	5	10.6	22	9.8	18	7.6	13	5.0	22	9.0	2	4.4	4	4.9	86	7.5
RANK 6	0	.0	8	3.6	8	3.4	9	3.4	18	7.4	1	2.2	2	2.5	46	4.0
RANK 7	1	2.1	11	4.9	10	4.2	7	2.7	11	4.5	3	6.7	6	7.4	49	4.3
RANK 8	1	2.1	9	4.0	4	1.7	10	3.8	6	2.5	3	6.7	2	2.5	35	3.1
RANK 9	1	2.1	6	2.7	9	3.8	3	1.1	5	2.0	0	.0	1	1.2	25	2.2
NOT RANKED	1	2.1	15	6.7	12	5.0	8	3.1	3	1.2	1	2.2	6	7.4	46	4.0
TIED WITH ONE OTHER ITEM	0	.0	5	2.2	0	.0	0	.0	1	.4	0	.0	0	.0	6	.5
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	1	.4	4	1.7	2	.8	1	.4	0	.0	1	1.2	9	.8
CAR LOCATERS																
RANK 1	1	2.1	5	2.2	3	1.3	6	2.3	22	9.0	4	8.9	5	6.2	46	4.0
RANK 2	1	2.1	14	6.2	9	3.8	14	5.3	18	7.4	7	15.6	0	.0	63	5.5
RANK 3	3	6.4	18	8.0	12	5.0	12	4.6	16	6.6	7	15.6	9	11.1	77	6.7
RANK 4	1	2.1	30	13.3	24	10.1	21	8.0	19	7.8	4	8.9	12	14.8	111	9.7
RANK 5	8	17.0	26	11.6	23	9.7	38	14.5	35	14.3	6	13.3	8	9.9	144	12.6
RANK 6	11	23.4	37	16.4	43	18.1	57	21.8	45	18.4	5	11.1	12	14.8	210	18.4
RANK 7	4	8.5	37	16.4	42	17.6	41	15.6	38	15.6	6	13.3	14	17.3	182	15.9
RANK 8	5	10.6	25	11.1	43	18.1	33	12.6	27	11.1	4	8.9	9	11.1	146	12.8
RANK 9	10	21.3	12	5.3	21	8.8	30	11.5	15	6.1	1	2.2	5	6.2	94	8.2
NOT RANKED	3	6.4	21	9.3	18	7.6	10	3.8	9	3.7	1	2.2	7	8.6	69	6.0
TIED WITH ONE OTHER ITEM	0	.0	2	.9	1	.4	0	.0	2	.8	0	.0	0	.0	5	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	1	.4	4	1.7	3	1.1	1	.4	0	.0	1	1.2	10	.9
HELMET WITH BUILT-IN TRANSCEIVING CAPACITY																
RANK 1	0	.0	2	.9	4	1.7	1	.4	3	1.2	0	.0	1	1.2	11	1.0
RANK 2	2	4.3	6	2.7	7	2.9	1	.4	2	.8	1	2.2	1	1.2	20	1.8
RANK 3	1	2.1	6	2.7	7	2.9	1	.4	5	2.0	0	.0	1	1.2	21	1.8
RANK 4	2	4.3	9	4.0	10	4.2	12	4.6	10	4.1	3	6.7	4	4.9	50	4.4
RANK 5	4	8.5	22	9.8	15	6.3	24	9.2	27	11.1	5	11.1	9	11.1	106	9.3
RANK 6	5	10.6	18	8.0	31	13.0	33	12.6	23	9.4	6	13.3	7	8.6	123	10.8
RANK 7	5	10.6	28	12.4	32	13.4	49	18.7	34	13.9	4	8.9	15	18.5	167	14.6
RANK 8	6	12.8	39	17.3	46	19.3	45	17.2	34	13.9	5	11.1	12	14.8	187	16.4
RANK 9	18	38.3	73	32.4	67	28.2	84	32.1	97	39.8	19	42.2	22	27.2	380	33.3
NOT RANKED	4	8.5	22	9.8	19	8.0	12	4.6	9	3.7	2	4.4	9	11.1	77	6.7
TIED WITH ONE OTHER ITEM	0	.0	6	2.7	1	.4	1	.4	1	.4	0	.0	0	.0	9	.8
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	1	.4	4	1.7	2	.8	1	.4	0	.0	1	1.2	9	.8

Table
II A-7 cont.

FREQUENCY DISTRIBUTION OF RANKS OF
COMMUNICATIONS EQUIPMENT AND SUPPLIES BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
BASE RADIO TRANSCEIVER																
RANK 1	8	17.0	63	28.0	58	24.4	81	30.9	62	25.4	4	8.9	21	25.9	297	26.0
RANK 2	18	38.3	47	20.9	67	28.2	65	24.8	34	13.9	4	8.9	24	29.6	259	22.7
RANK 3	7	14.9	21	9.3	35	14.7	38	14.5	31	12.7	7	15.6	8	9.9	147	12.9
RANK 4	5	10.6	18	8.0	18	7.6	13	5.0	26	10.7	4	8.9	4	4.9	88	7.7
RANK 5	2	4.3	14	6.2	13	5.5	21	8.0	17	7.0	4	8.9	7	8.6	78	6.8
RANK 6	2	4.3	11	4.9	10	4.2	15	5.7	15	6.1	7	15.6	3	3.7	63	5.5
RANK 7	3	6.4	8	3.6	15	6.3	8	3.1	20	8.2	7	15.6	6	7.4	67	5.9
RANK 8	1	2.1	18	8.0	5	2.1	10	3.8	25	10.2	4	8.9	4	4.9	67	5.9
RANK 9	1	2.1	13	5.8	5	2.1	7	2.7	9	3.7	3	6.7	2	2.5	40	3.5
NOT RANKED	0	.0	12	5.3	12	5.0	4	1.5	5	2.0	1	2.2	2	2.5	36	3.2
TIED WITH ONE OTHER ITEM	0	.0	1	.4	1	.4	1	.4	0	.0	1	2.2	0	.0	4	.4
TIED WITH MORE THAN ONE OTHER ITEM	1	2.1	2	.9	4	1.7	2	.8	2	.8	0	.0	1	1.2	12	1.1
MOBILE TRANSCEIVERS																
RANK 1	21	44.7	51	22.7	84	35.3	62	23.7	44	18.0	9	20.0	28	34.6	299	26.2
RANK 2	10	21.3	76	33.8	67	28.2	95	36.3	75	30.7	13	28.9	20	24.7	356	31.2
RANK 3	7	14.9	23	10.2	20	8.4	25	9.5	23	9.4	3	6.7	8	9.9	109	9.5
RANK 4	4	8.5	12	5.3	14	5.9	22	8.4	19	7.8	4	8.9	8	9.9	83	7.3
RANK 5	1	2.1	11	4.9	17	7.1	20	7.6	24	9.8	5	11.1	4	4.9	82	7.2
RANK 6	1	2.1	12	5.3	12	5.0	13	5.0	16	6.6	3	6.7	2	2.5	59	5.2
RANK 7	2	4.3	11	4.9	6	2.5	9	3.4	21	8.6	2	4.4	2	2.5	53	4.6
RANK 8	1	2.1	11	4.9	6	2.5	7	2.7	11	4.5	2	4.4	3	3.7	41	3.6
RANK 9	0	.0	7	3.1	3	1.3	6	2.3	7	2.9	3	6.7	4	4.9	30	2.6
NOT RANKED	0	.0	11	4.9	9	3.8	3	1.1	4	1.6	1	2.2	2	2.5	30	2.6
TIED WITH ONE OTHER ITEM	0	.0	1	.4	1	.4	0	.0	0	.0	0	.0	0	.0	2	.2
TIED WITH MORE THAN ONE OTHER ITEM	1	2.1	2	.9	4	1.7	2	.8	2	.8	0	.0	0	.0	11	1.0
DIGITAL DATA COMMUNICATIONS																
RANK 1	1	2.1	7	3.1	5	2.1	8	3.1	12	4.9	10	22.2	1	1.2	44	3.9
RANK 2	3	6.4	6	2.7	4	1.7	6	2.3	13	5.3	1	2.2	2	2.5	35	3.1
RANK 3	1	2.1	13	5.8	8	3.4	13	5.0	13	5.3	6	13.3	4	4.9	58	5.1
RANK 4	1	2.1	17	7.6	17	7.1	14	5.3	19	7.8	3	6.7	5	6.2	76	6.7
RANK 5	5	10.6	17	7.6	17	7.1	23	8.8	26	10.7	4	8.9	5	6.2	97	8.5
RANK 6	7	14.9	31	13.8	28	11.8	25	9.5	30	12.3	4	8.9	11	13.6	136	11.9
RANK 7	11	23.4	34	15.1	41	17.2	46	17.6	40	16.4	7	15.6	6	7.4	185	16.2
RANK 8	11	23.4	39	17.3	44	18.5	56	21.4	50	20.5	7	15.6	21	25.9	228	20.0
RANK 9	3	6.4	40	17.8	55	23.1	60	22.9	34	13.9	2	4.4	18	22.2	212	18.6
NOT RANKED	4	8.5	21	9.3	19	8.0	11	4.2	7	2.9	1	2.2	8	9.9	71	6.2
TIED WITH ONE OTHER ITEM	0	.0	2	.9	1	.4	1	.4	0	.0	0	.0	0	.0	4	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	1	.4	4	1.7	3	1.1	1	.4	0	.0	1	1.2	10	.9

ANALYSIS FOR DETECTION SYSTEMS

Table
II B-1

NATIONAL RANKS

NARCOTIC AND EXPLOSIVE DETECTORS	3
PRE-ARREST BREATH-ALCOHOL SCREENING DEVICE	5
QUANTITATIVE BREATH-ALCOHOL DEVICE	4
FINGERPRINT KITS	1
WALK-THROUGH METAL WEAPONS DETECTORS	9
HAND-HELD METAL WEAPONS DETECTORS	7
OTHER TYPES OF WEAPONS DETECTORS	11
GAS CHROMATOGRAPH FOR LABORATORY USE ONLY	10
X-RAY EQUIPMENT USED BY BOMB SQUADS	8
FIELD NARCOTIC SCREENING KITS	2
POLYGRAPH	6

Table
II B-2

ITEMS WITH EXTREME RANK SUMS BY DEPARTMENT TYPE
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	STATE	COUNTY	CITY(1-9 OFFICERS)	CITY(10-49 OFFICERS)	CITY(50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
	221, 342	1154,1413	1217,1482	1417,1702	1302,1577	210, 329	384, 539
NARCOTIC AND EXPLOSIVE DETECTORS	218.	887.	****	****	926.	143.	308.
PRE-ARREST BREATH-ALCOHOL SCREENING DEVICE	156.	994.	743.	****	****	****	268.
QUANTITATIVE BREATH-ALCOHOL DEVICE	161.	****	788.	975.	****	****	256.
FINGERPRINT KITS	****	824.	862.	****	****	****	285.
WALK-THROUGH METAL WEAPONS DETECTORS	416.	****	****	****	****	****	601.
HAND-HELD METAL WEAPONS DETECTORS	****	****	****	****	****	****	****
OTHER TYPES OF WEAPONS DETECTORS	407.	****	****	****	****	331.	629.
GAS CHROMATOGRAPH FOR LABORATORY USE ONLY	****	****	****	****	****	354.	762.
X-RAY EQUIPMENT USED BY BOMB SQUADS	344.	****	****	****	****	****	689.
FIELD NARCOTIC SCREENING KITS	169.	820.	813.	844.	807.	159.	240.
POLYGRAPH	****	****	****	****	****	****	****

Table
II B-3

THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 47 STATE DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 214 COUNTY DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 225 CITY(1-9 OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 260 CITY(10-49 OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 240 CITY(50 OR MORE OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 45 FIFTY LARGEST CITIES DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 77 TOWNSHIP DEPARTMENTS.

RANKS BY DEPARTMENT TYPE

	STATE	COUNTY	CITY(1-9 OFFICERS)	CITY(10-49 OFFICERS)	CITY(50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
NARCOTIC AND EXPLOSIVE DETECTORS	4	2	5	5	2	2	4
PRE-ARREST BREATH-ALCOHOL SCREENING DEVICE	2	7	4	2	4	10	3
QUANTITATIVE BREATH-ALCOHOL DEVICE	1	4	2	3	3	8	2
FINGERPRINT KITS	5	1	1	4	5	1	5
WALK-THROUGH METAL WEAPONS DETECTORS	11	9	8	8	9	4	9
HAND-HELD METAL WEAPONS DETECTORS	9	10	7	7	8	3	7
OTHER TYPES OF WEAPONS DETECTORS	10	11	11	9	10	11	10
GAS CHROMATOGRAPH FOR LABORATORY USE ONLY	7	8	10	11	11	9	11
X-RAY EQUIPMENT USED BY BOMB SQUADS	8	5	9	10	7	7	8
FIELD NARCOTIC SCREENING KITS	3	3	3	1	1	5	1
POLYGRAPH	6	6	6	6	6	6	6

COMPOSITE RANKS FOR ALL CITIES

NARCOTIC AND EXPLOSIVE DETECTORS	3
PRE-ARREST BREATH-ALCOHOL SCREENING DEVICE	5
QUANTITATIVE BREATH-ALCOHOL DEVICE	4
FINGERPRINT KITS	1
WALK-THROUGH METAL WEAPONS DETECTORS	8
HAND-HELD METAL WEAPONS DETECTORS	7
OTHER TYPES OF WEAPONS DETECTORS	11
GAS CHROMATOGRAPH FOR LABORATORY USE ONLY	10
X-RAY EQUIPMENT USED BY BOMB SQUADS	9
FIELD NARCOTIC SCREENING KITS	2
POLYGRAPH	6

Table
II B-4

THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 111 DEPARTMENTS IN LEAA REGION 1
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 125 DEPARTMENTS IN LEAA REGION 2
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 124 DEPARTMENTS IN LEAA REGION 3
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 113 DEPARTMENTS IN LEAA REGION 4
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 131 DEPARTMENTS IN LEAA REGION 5
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 100 DEPARTMENTS IN LEAA REGION 6
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 98 DEPARTMENTS IN LEAA REGION 7
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 97 DEPARTMENTS IN LEAA REGION 8
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 115 DEPARTMENTS IN LEAA REGION 9
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 94 DEPARTMENTS IN LEAA REGION 10

RANKS BY LEAA REGION

	1	2	3	4	5	6	7	8	9	10
NARCOTIC AND EXPLOSIVE DETECTORS	3	4	5	2	1	1	3	1	4	3
PRE-ARREST BREATH-ALCOHOL SCREENING DEVICE	4	5	7	4	6	4	2	3	8	2
QUANTITATIVE BREATH-ALCOHOL DEVICE	2	6	2	3	4	3	4	4	2	4
FINGERPRINT KITS	5	1	1	5	5	6	5	5	1	5
WALK-THROUGH METAL WEAPONS DETECTORS	9	3	6	9	9	9	9	8	9	11
HAND-HELD METAL WEAPONS DETECTORS	8	7	8	7	3	7	7	9	10	8
OTHER TYPES OF WEAPONS DETECTORS	10	10	10	10	10	11	10	11	11	10
GAS CHROMATOGRAPH FOR LABORATORY USE ONLY	11	11	11	11	11	10	8	7	3	9
X-RAY EQUIPMENT USED BY BOMB SQUADS	6	8	9	8	8	8	11	10	6	7
FIELD NARCOTIC SCREENING KITS	1	2	3	1	2	2	1	2	5	1
POLYGRAPH	7	9	4	6	7	5	6	6	7	6

Table
II B-5

ITEMS WITH EXTREME RANK SUMS BY LEAA REGION
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	1 572, 759	2 650, 849	3 645, 842	4 583, 772	5 684, 887
NARCOTIC AND EXPLOSIVE DETECTORS	449.	526.	510.	472.	539.
PRE-ARREST BREATH-ALCOHOL SCREENING DEVICE	493.	482.	495.	483.	534.
QUANTITATIVE BREATH-ALCOHOL DEVICE	478.	437.	483.	487.	555.
FINGERPRINT KITS	438.	560.	521.	447.	586.
WALK-THROUGH METAL WEAPONS DETECTORS	830.	949.	958.	814.	****
HAND-HELD METAL WEAPONS DETECTORS	****	****	****	****	****
OTHER TYPES OF WEAPONS DETECTORS	906.	971.	992.	911.	****
GAS CHROMATOGRAPH FOR LABORATORY USE ONLY	****	****	****	****	****
X-RAY EQUIPMENT USED BY BOMB SQUADS	920.	****	****	944.	****
FIELD NARCOTIC SCREENING KITS	359.	400.	450.	428.	460.
POLYGRAPH	****	****	****	****	****

ITEMS WITH EXTREME RANK SUMS BY LEAA REGION
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	6 511, 688	7 500, 675	8 494, 669	9 594, 785	10 478, 649
NARCOTIC AND EXPLOSIVE DETECTORS	423.	410.	422.	474.	389.
PRE-ARREST BREATH-ALCOHOL SCREENING DEVICE	442.	348.	398.	469.	376.
QUANTITATIVE BREATH-ALCOHOL DEVICE	448.	403.	387.	442.	379.
FINGERPRINT KITS	508.	453.	430.	561.	395.
WALK-THROUGH METAL WEAPONS DETECTORS	742.	768.	776.	889.	767.
HAND-HELD METAL WEAPONS DETECTORS	****	****	****	****	****
OTHER TYPES OF WEAPONS DETECTORS	823.	771.	829.	918.	785.
GAS CHROMATOGRAPH FOR LABORATORY USE ONLY	897.	870.	771.	****	882.
X-RAY EQUIPMENT USED BY BOMB SQUADS	761.	831.	810.	927.	753.
FIELD NARCOTIC SCREENING KITS	356.	379.	359.	393.	266.
POLYGRAPH	****	****	****	****	****

Table
II B-6

REGARDING EACH REGION AS A RESPONDENT, IF THE TEN RANKINGS WERE RANDOM,
THE RANK SUM OF AN ITEM WOULD LIE IN THE INTERVAL (32, 88)
95 PERCENT OF THE TIME. THE FOLLOWING ITEMS LIE OUTSIDE THIS INTERVAL:

NARCOTIC AND EXPLOSIVE DETECTORS	21.
OTHER TYPES OF WEAPONS DETECTORS	99.
GAS CHROMATOGRAPH FOR LABORATORY USE ONLY	99.
FIELD NARCOTIC SCREENING KITS	21.

REGARDING EACH LEAA REGION AS A RESPONDENT,
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL.

REGARDING EACH DEPARTMENT TYPE AS A RESPONDENT, IF THE SEVEN RANKINGS WERE RANDOM,
THE RANK SUM OF AN ITEM WOULD LIE IN THE INTERVAL (19, 65)
95 PERCENT OF THE TIME. THE FOLLOWING ITEMS LIE OUTSIDE THIS INTERVAL:

OTHER TYPES OF WEAPONS DETECTORS	68.
GAS CHROMATOGRAPH FOR LABORATORY USE ONLY	72.
FIELD NARCOTIC SCREENING KITS	14.

REGARDING EACH DEPARTMENT TYPE AS A RESPONDENT,
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL.

Table
II B-7

FREQUENCY DISTRIBUTION OF RANKS OF DETECTION SYSTEMS BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
NARCOTIC AND EXPLOSIVE DETECTORS																
RANK 1	5	10.6	25	11.1	26	10.9	42	16.0	49	20.1	12	26.7	7	8.6	166	14.5
RANK 2	3	6.4	46	20.4	21	8.8	29	11.1	23	9.4	7	15.6	15	18.5	144	12.6
RANK 3	7	14.9	30	13.3	34	14.3	29	11.1	38	15.6	8	17.8	5	6.2	151	13.2
RANK 4	8	17.0	26	11.6	38	16.0	36	13.7	42	17.2	8	17.8	21	25.9	179	15.7
RANK 5	6	12.8	33	14.7	34	14.3	45	17.2	40	16.4	5	11.1	15	18.5	178	15.6
RANK 6	8	17.0	18	8.0	31	13.0	44	16.8	22	9.0	3	6.7	9	11.1	135	11.8
RANK 7	4	8.5	8	3.6	10	4.2	11	4.2	7	2.9	0	.0	1	1.2	41	3.6
RANK 8	2	4.3	11	4.9	7	2.9	8	3.1	8	3.3	1	2.2	0	.0	37	3.2
RANK 9	0	.0	2	.9	2	.8	5	1.9	4	1.6	0	.0	2	2.5	15	1.3
RANK 10	1	2.1	2	.9	8	3.4	2	.8	3	1.2	0	.0	0	.0	16	1.4
RANK 11	0	.0	5	2.2	6	2.5	3	1.1	2	.8	0	.0	0	.0	16	1.4
NOT RANKED	3	6.4	19	8.4	21	8.8	8	3.1	6	2.5	1	2.2	6	7.4	64	5.6
TIED WITH ONE OTHER ITEM	0	.0	1	.4	1	.4	2	.8	1	.4	0	.0	0	.0	5	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	5	2.1	2	.8	1	.4	0	.0	1	1.2	12	1.1
PRE-ARREST BREATH-ALCOHOL SCREENING DEVICE																
RANK 1	13	27.7	28	12.4	51	21.4	49	18.7	27	11.1	2	4.4	15	18.5	185	16.2
RANK 2	12	25.5	27	12.0	60	25.2	48	18.3	45	18.4	4	8.9	15	18.5	211	18.5
RANK 3	10	21.3	32	14.2	32	13.4	40	15.3	39	16.0	9	20.0	14	17.3	176	15.4
RANK 4	2	4.3	38	16.9	33	13.9	28	10.7	24	9.8	6	13.3	11	13.6	142	12.4
RANK 5	3	6.4	20	8.9	15	6.3	27	10.3	32	13.1	3	6.7	9	11.1	109	9.5
RANK 6	0	.0	11	4.9	6	2.5	25	9.5	20	8.2	3	6.7	5	6.2	70	6.1
RANK 7	1	2.1	14	6.2	6	2.5	11	4.2	17	7.0	2	4.4	4	4.9	55	4.8
RANK 8	0	.0	12	5.3	3	1.3	6	2.3	8	3.3	3	6.7	1	1.2	33	2.9
RANK 9	0	.0	12	5.3	2	.8	10	3.8	11	4.5	6	13.3	1	1.2	42	3.7
RANK 10	3	6.4	7	3.1	5	2.1	7	2.7	6	2.5	3	6.7	0	.0	31	2.7
RANK 11	2	4.3	6	2.7	6	2.5	4	1.5	10	4.1	3	6.7	0	.0	31	2.7
NOT RANKED	1	2.1	18	8.0	19	8.0	7	2.7	5	2.0	1	2.2	6	7.4	57	5.0
TIED WITH ONE OTHER ITEM	0	.0	2	.9	2	.8	0	.0	1	.4	0	.0	0	.0	5	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	4	1.7	2	.8	1	.4	0	.0	1	1.2	11	1.0
QUANTITATIVE BREATH-ALCOHOL DEVICE																
RANK 1	14	29.8	22	9.8	41	17.2	47	17.9	40	16.4	2	4.4	18	22.2	184	16.1
RANK 2	10	21.3	31	13.8	45	18.9	56	21.4	34	13.9	5	11.1	14	17.3	195	17.1
RANK 3	5	10.6	32	14.2	42	17.6	44	16.8	38	15.6	5	11.1	19	23.5	185	16.2
RANK 4	4	8.5	38	16.9	43	18.1	34	13.0	35	14.3	5	11.1	6	7.4	165	14.4
RANK 5	6	12.8	23	10.2	21	8.8	31	11.8	21	8.6	4	8.9	8	9.9	114	10.0
RANK 6	2	4.3	17	7.6	9	3.8	12	4.6	19	7.8	2	4.4	5	6.2	66	5.8
RANK 7	1	2.1	10	4.4	5	2.1	5	1.9	15	6.1	5	11.1	2	2.5	43	3.8
RANK 8	1	2.1	8	3.6	4	1.7	8	3.1	12	4.9	5	11.1	2	2.5	40	3.5
RANK 9	0	.0	11	4.9	1	.4	5	1.9	8	3.3	1	2.2	1	1.2	27	2.4
RANK 10	2	4.3	11	4.9	2	.8	6	2.3	11	4.5	7	15.6	1	1.2	40	3.5
RANK 11	1	2.1	5	2.2	8	3.4	7	2.7	6	2.5	3	6.7	0	.0	30	2.6
NOT RANKED	1	2.1	17	7.6	17	7.1	7	2.7	5	2.0	1	2.2	5	6.2	53	4.6
TIED WITH ONE OTHER ITEM	0	.0	0	.0	1	.4	0	.0	0	.0	0	.0	0	.0	1	.1
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	3	1.3	2	.8	0	.0	0	.0	1	1.2	8	.7

Table
II B-7 cont.

FREQUENCY DISTRIBUTION OF RANKS OF
DETECTION SYSTEMS BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
FINGERPRINT KITS																
RANK 1	1	2.1	61	27.1	48	20.2	49	18.7	27	11.1	5	11.1	12	14.8	203	17.8
RANK 2	3	6.4	22	9.8	28	11.8	29	11.1	23	9.4	6	13.3	13	16.0	124	10.9
RANK 3	5	10.6	27	12.0	43	18.1	45	17.2	23	9.4	1	2.2	12	14.8	156	13.7
RANK 4	4	8.5	25	11.1	29	12.2	49	18.7	34	13.9	3	6.7	14	17.3	158	13.8
RANK 5	6	12.8	27	12.0	28	11.8	33	12.6	26	10.7	2	4.4	18	22.2	140	12.3
RANK 6	8	17.0	15	6.7	16	6.7	16	6.1	19	7.8	5	11.1	2	2.5	81	7.1
RANK 7	5	10.6	9	4.0	9	3.8	11	4.2	22	9.0	7	15.6	1	1.2	64	5.6
RANK 8	2	4.3	7	3.1	4	1.7	4	1.5	17	7.0	2	4.4	1	1.2	37	3.2
RANK 9	4	8.5	7	3.1	2	.8	4	1.5	18	7.4	4	8.9	0	.0	39	3.4
RANK 10	3	6.4	3	1.3	11	4.6	7	2.7	17	7.0	5	11.1	1	1.2	47	4.1
RANK 11	4	8.5	7	3.1	2	.8	11	4.2	14	5.7	5	11.1	1	1.2	44	3.9
NOT RANKED	2	4.3	15	6.7	18	7.6	4	1.5	4	1.6	0	.0	6	7.4	49	4.3
TIED WITH ONE OTHER ITEM	0	.0	1	.4	1	.4	0	.0	4	1.6	0	.0	0	.0	6	.5
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	3	1.3	2	.8	1	.4	0	.0	1	1.2	9	.8
WALK-THROUGH METAL WEAPONS DETECTORS																
RANK 1	0	.0	12	5.3	1	.4	1	.4	4	1.6	1	2.2	2	2.5	21	1.8
RANK 2	0	.0	5	2.2	3	1.3	2	.8	5	2.0	2	4.4	0	.0	17	1.5
RANK 3	1	2.1	7	3.1	2	.8	6	2.3	9	3.7	4	8.9	2	2.5	31	2.7
RANK 4	0	.0	7	3.1	5	2.1	9	3.4	13	5.3	5	11.1	2	2.5	41	3.6
RANK 5	1	2.1	12	5.3	10	4.2	12	4.6	18	7.4	4	8.9	1	1.2	58	5.1
RANK 6	0	.0	21	9.3	22	9.2	16	6.1	12	4.9	3	6.7	3	3.7	77	6.7
RANK 7	3	6.4	34	15.1	32	13.4	43	16.4	36	14.8	5	11.1	17	21.0	170	14.9
RANK 8	12	25.5	32	14.2	52	21.8	57	21.8	49	20.1	7	15.6	20	24.7	229	20.1
RANK 9	8	17.0	31	13.8	35	14.7	50	19.1	48	19.7	5	11.1	10	12.3	187	16.4
RANK 10	11	23.4	17	7.6	30	12.6	41	15.6	30	12.3	5	11.1	13	16.0	147	12.9
RANK 11	8	17.0	19	8.4	22	9.2	14	5.3	10	4.1	3	6.7	2	2.5	78	6.8
NOT RANKED	3	6.4	28	12.4	24	10.1	11	4.2	10	4.1	1	2.2	9	11.1	86	7.5
TIED WITH ONE OTHER ITEM	0	.0	1	.4	3	1.3	2	.8	3	1.2	0	.0	1	1.2	10	.9
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	4	1.7	2	.8	0	.0	0	.0	1	1.2	9	.8
HAND-HELD METAL WEAPONS DETECTORS																
RANK 1	0	.0	2	.9	2	.8	7	2.7	3	1.2	2	4.4	1	1.2	17	1.5
RANK 2	1	2.1	11	4.9	7	2.9	7	2.7	15	6.1	0	.0	2	2.5	43	3.8
RANK 3	3	6.4	10	4.4	6	2.5	7	2.7	14	5.7	7	15.6	2	2.5	49	4.3
RANK 4	6	12.8	14	6.2	14	5.9	15	5.7	23	9.4	5	11.1	3	3.7	80	7.0
RANK 5	3	6.4	16	7.1	25	10.5	22	8.4	21	8.6	6	13.3	7	8.6	100	8.8
RANK 6	3	6.4	40	17.8	39	16.4	44	16.8	41	16.8	3	6.7	17	21.0	187	16.4
RANK 7	8	17.0	37	16.4	53	22.3	63	24.0	47	19.3	8	17.8	16	19.8	232	20.3
RANK 8	6	12.8	28	12.4	36	15.1	48	18.3	33	13.5	6	13.3	14	17.3	171	15.0
RANK 9	11	23.4	20	8.9	19	8.0	20	7.6	23	9.4	4	8.9	6	7.4	103	9.0
RANK 10	3	6.4	15	6.7	10	4.2	9	3.4	10	4.1	4	8.9	3	3.7	54	4.7
RANK 11	0	.0	8	3.6	4	1.7	9	3.4	6	2.5	0	.0	1	1.2	28	2.5
NOT RANKED	3	6.4	24	10.7	23	9.7	11	4.2	8	3.3	0	.0	9	11.1	78	6.8
TIED WITH ONE OTHER ITEM	0	.0	3	1.3	1	.4	1	.4	2	.8	0	.0	0	.0	7	.6
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	5	2.1	2	.8	0	.0	0	.0	1	1.2	10	.9

FREQUENCY DISTRIBUTION OF RANKS OF DETECTION SYSTEMS BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
OTHER TYPES OF WEAPONS DETECTORS																
RANK 1	0	.0	2	.9	0	.0	0	.0	2	.8	0	.0	0	.0	4	.4
RANK 2	0	.0	4	1.8	0	.0	2	.8	2	.8	1	2.2	0	.0	9	.8
RANK 3	0	.0	6	2.7	2	.8	5	1.9	8	3.3	2	4.4	1	1.2	24	2.1
RANK 4	2	4.3	5	2.2	2	.8	2	.8	7	2.9	1	2.2	0	.0	19	1.7
RANK 5	2	4.3	23	10.2	9	3.8	6	2.3	14	5.7	8	17.8	2	2.5	64	5.6
RANK 6	5	10.6	11	4.9	17	7.1	15	5.7	27	11.1	3	6.7	8	9.9	86	7.5
RANK 7	1	2.1	33	14.7	41	17.2	36	13.7	31	12.7	8	17.8	13	16.0	163	14.3
RANK 8	5	10.6	31	13.8	42	17.6	51	19.5	45	18.4	6	13.3	14	17.3	194	17.0
RANK 9	9	19.1	41	18.2	38	16.0	64	24.4	44	18.0	5	11.1	18	22.2	219	19.2
RANK 10	10	21.3	26	11.6	39	16.4	38	14.5	32	13.1	7	15.6	10	12.3	162	14.2
RANK 11	9	19.1	17	7.6	20	8.4	30	11.5	23	9.4	2	4.4	6	7.4	107	9.4
NOT RANKED	4	8.5	26	11.6	28	11.8	13	5.0	9	3.7	2	4.4	9	11.1	91	8.0
TIED WITH ONE OTHER ITEM	0	.0	2	.9	1	.4	2	.8	2	.8	0	.0	0	.0	7	.6
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	5	2.1	2	.8	0	.0	0	.0	1	1.2	10	.9
GAS CHROMATOGRAPH FOR LABORATORY USE ONLY																
RANK 1	2	4.3	2	.9	1	.4	0	.0	0	.0	3	6.7	0	.0	8	.7
RANK 2	4	8.5	3	1.3	2	.8	2	.8	6	2.5	0	.0	0	.0	17	1.5
RANK 3	5	10.6	2	.9	3	1.3	6	2.3	5	2.0	1	2.2	0	.0	22	1.9
RANK 4	2	4.3	1	.4	0	.0	4	1.5	2	.8	2	4.4	0	.0	11	1.0
RANK 5	4	8.5	7	3.1	3	1.3	6	2.3	3	1.2	2	4.4	0	.0	25	2.2
RANK 6	2	4.3	9	4.0	10	4.2	8	3.1	9	3.7	6	13.3	2	2.5	46	4.0
RANK 7	5	10.6	9	4.0	9	3.8	19	7.3	13	5.3	3	6.7	1	1.2	59	5.2
RANK 8	4	8.5	26	11.6	21	8.8	25	9.5	13	5.3	7	15.6	4	4.9	100	8.8
RANK 9	4	8.5	26	11.6	45	18.9	27	10.3	27	11.1	4	8.9	12	14.8	145	12.7
RANK 10	7	14.9	41	18.2	36	15.1	50	19.1	47	19.3	5	11.1	17	21.0	203	17.8
RANK 11	5	10.6	72	32.0	85	35.7	104	39.7	110	45.1	11	24.4	36	44.4	423	37.0
NOT RANKED	3	6.4	27	12.0	23	9.7	11	4.2	9	3.7	1	2.2	9	11.1	83	7.3
TIED WITH ONE OTHER ITEM	0	.0	1	.4	0	.0	0	.0	1	.4	0	.0	0	.0	2	.2
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	5	2.1	2	.8	1	.4	0	.0	1	1.2	11	1.0
X-RAY EQUIPMENT USED BY BOMB SQUADS																
RANK 1	0	.0	3	1.3	0	.0	0	.0	9	3.7	2	4.4	0	.0	14	1.2
RANK 2	3	6.4	7	3.1	0	.0	2	.8	10	4.1	7	15.6	1	1.2	30	2.6
RANK 3	2	4.3	6	2.7	1	.4	4	1.5	9	3.7	2	4.4	1	1.2	25	2.2
RANK 4	2	4.3	5	2.2	7	2.9	5	1.9	14	5.7	2	4.4	0	.0	35	3.1
RANK 5	1	2.1	5	2.2	9	3.8	10	3.8	22	9.0	2	4.4	2	2.5	51	4.5
RANK 6	5	10.6	14	6.2	13	5.5	17	6.5	21	8.6	10	22.2	1	1.2	81	7.1
RANK 7	12	25.5	24	10.7	24	10.1	33	12.6	22	9.0	1	2.2	11	13.6	127	11.1
RANK 8	5	10.6	25	11.1	22	9.2	28	10.7	26	10.7	3	6.7	6	7.4	115	10.1
RANK 9	4	8.5	33	14.7	51	21.4	46	17.6	28	11.5	8	17.8	12	14.8	182	15.9
RANK 10	2	4.3	48	21.3	49	20.6	65	24.8	49	20.1	3	6.7	20	24.7	236	20.7
RANK 11	8	17.0	27	12.0	38	16.0	38	14.5	23	9.4	5	11.1	17	21.0	156	13.7
NOT RANKED	3	6.4	28	12.4	24	10.1	14	5.3	11	4.5	0	.0	10	12.3	90	7.9
TIED WITH ONE OTHER ITEM	0	.0	1	.4	1	.4	0	.0	2	.8	0	.0	0	.0	4	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	5	2.1	2	.8	1	.4	0	.0	1	1.2	12	1.1

Table
II B-7 cont.

FREQUENCY DISTRIBUTION OF RANKS OF DETECTION SYSTEMS BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
FIELD NARCOTIC SCREENING KITS																
RANK 1	9	19.1	44	19.6	45	18.9	59	22.5	53	21.7	14	31.1	26	32.1	250	21.9
RANK 2	10	21.3	38	16.9	46	19.3	62	23.7	57	23.4	6	13.3	13	16.0	232	20.3
RANK 3	6	12.8	43	19.1	41	17.2	45	17.2	43	17.6	4	8.9	12	14.8	194	17.0
RANK 4	8	17.0	22	9.8	25	10.5	33	12.6	25	10.2	5	11.1	11	13.6	129	11.3
RANK 5	6	12.8	17	7.6	23	9.7	25	9.5	18	7.4	5	11.1	3	3.7	97	8.5
RANK 6	2	4.3	14	6.2	15	6.3	17	6.5	19	7.8	5	11.1	2	2.5	74	6.5
RANK 7	2	4.3	7	3.1	6	2.5	6	2.3	9	3.7	3	6.7	3	3.7	36	3.2
RANK 8	2	4.3	6	2.7	8	3.4	2	.8	7	2.9	2	4.4	2	2.5	29	2.5
RANK 9	0	.0	4	1.8	3	1.3	2	.8	4	1.6	1	2.2	1	1.2	15	1.3
RANK 10	0	.0	10	4.4	6	2.5	3	1.1	3	1.2	0	.0	1	1.2	23	2.0
RANK 11	1	2.1	2	.9	1	.4	5	1.9	2	.8	0	.0	0	.0	11	1.0
NOT RANKED	1	2.1	18	8.0	19	8.0	3	1.1	4	1.6	0	.0	7	8.6	52	4.6
TIED WITH ONE OTHER ITEM	0	.0	2	.9	2	.8	0	.0	1	.4	0	.0	0	.0	5	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	3	1.3	2	.8	0	.0	0	.0	1	1.2	8	.7
POLYGRAPH																
RANK 1	3	6.4	21	9.3	12	5.0	17	6.5	26	10.7	2	4.4	3	3.7	84	7.4
RANK 2	1	2.1	16	7.1	10	4.2	21	8.0	20	8.2	7	15.6	3	3.7	78	6.8
RANK 3	2	4.3	16	7.1	13	5.5	24	9.2	13	5.3	2	4.4	5	6.2	75	6.6
RANK 4	7	14.9	26	11.6	19	8.0	34	13.0	22	9.0	3	6.7	6	7.4	117	10.2
RANK 5	5	10.6	19	8.4	38	16.0	33	12.6	29	11.9	4	8.9	7	8.6	135	11.8
RANK 6	9	19.1	29	12.9	33	13.9	37	14.1	26	10.7	2	4.4	17	21.0	153	13.4
RANK 7	2	4.3	16	7.1	15	6.3	12	4.6	17	7.0	3	6.7	2	2.5	67	5.9
RANK 8	5	10.6	12	5.3	13	5.5	12	4.6	19	7.8	3	6.7	8	9.9	72	6.3
RANK 9	4	8.5	15	6.7	16	6.7	18	6.9	16	6.6	6	13.3	8	9.9	83	7.3
RANK 10	2	4.3	12	5.3	9	3.8	15	5.7	21	8.6	3	6.7	5	6.2	67	5.9
RANK 11	4	8.5	20	8.9	36	15.1	26	9.9	26	10.7	10	22.2	10	12.3	132	11.6
NOT RANKED	3	6.4	23	10.2	24	10.1	13	5.0	9	3.7	0	.0	7	8.6	79	6.9
TIED WITH ONE OTHER ITEM	0	.0	4	1.8	1	.4	1	.4	1	.4	0	.0	1	1.2	8	.7
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	4	1.7	2	.8	1	.4	0	.0	1	1.2	10	.9

Table
II C-1

NATIONAL RANKS

FLARES	9
FLOOD LIGHTS	10
FIRST AID KITS	5
SIRENS	4
LOUDSPEAKERS	7
FIRE EXTINGUISHERS	8
COMBINED SIREN/LIGHT/LOUDSPEAKER SYSTEM	1
FLASHING LIGHTS	2
SPOT LIGHTS	6
REFLECTORS	11
RESCUE EQUIPMENT	3

Table
II C-2

ITEMS WITH EXTREME RANK SUMS BY DEPARTMENT TYPE
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	STATE	COUNTY	CITY(1-9 OFFICERS)	CITY(10-49 OFFICERS)	CITY(50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
	221, 342	1177,1438	1268,1539	1411,1696	1302,1577	210, 329	400, 559
FLARES	****	****	****	****	****	****	****
FLOOD LIGHTS	413.	****	****	****	****	****	640.
FIRST AID KITS	****	****	****	****	****	****	349.
SIRENS	****	****	****	****	****	****	****
LOUDSPEAKERS	****	****	****	****	****	****	610.
FIRE EXTINGUISHERS	****	****	****	****	****	333.	****
COMBINED SIREN/LIGHT/LOUDSPEAKER SYSTEM	158.	947.	926.	856.	745.	151.	333.
FLASHING LIGHTS	140.	****	****	****	****	157.	314.
SPOT LIGHTS	****	****	****	****	****	****	****
REFLECTORS	426.	****	****	****	****	371.	681.
RESCUE EQUIPMENT	****	****	****	****	****	****	****

Table
II C-3

THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 47 STATE DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 219 COUNTY DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 234 CITY(1-9 OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 259 CITY(10-49 OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 240 CITY(50 OR MORE OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 45 FIFTY LARGEST CITIES DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 80 TOWNSHIP DEPARTMENTS.

RANKS BY DEPARTMENT TYPE

	STATE	COUNTY	CITY(1-9 OFFICERS)	CITY(10-49 OFFICERS)	CITY(50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
FLARES	7	10	4	8	10	9	7
FLOOD LIGHTS	11	9	10	10	9	11	11
FIRST AID KITS	5	4	5	4	4	8	3
SIRENS	4	5	7	5	5	4	5
LOUDSPEAKERS	6	7	9	7	7	6	10
FIRE EXTINGUISHERS	8	6	8	9	8	7	6
COMBINED SIREN/LIGHT/LOUDSPEAKER SYSTEM	2	1	1	1	1	1	1
FLASHING LIGHTS	1	2	2	2	2	3	4
SPOT LIGHTS	9	8	6	6	6	5	8
REFLECTORS	10	11	11	11	11	10	9
RESCUE EQUIPMENT	3	3	3	3	3	2	2

COMPOSITE RANKS FOR ALL CITIES

FLARES	8
FLOOD LIGHTS	10
FIRST AID KITS	5
SIRENS	4
LOUDSPEAKERS	7
FIRE EXTINGUISHERS	9
COMBINED SIREN/LIGHT/LOUDSPEAKER SYSTEM	1
FLASHING LIGHTS	2
SPOT LIGHTS	6
REFLECTORS	11
RESCUE EQUIPMENT	3

Table

II C-4

THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 114 DEPARTMENTS IN LEAA REGION 1
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 128 DEPARTMENTS IN LEAA REGION 2
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 126 DEPARTMENTS IN LEAA REGION 3
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 113 DEPARTMENTS IN LEAA REGION 4
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 133 DEPARTMENTS IN LEAA REGION 5
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 103 DEPARTMENTS IN LEAA REGION 6
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 99 DEPARTMENTS IN LEAA REGION 7
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 98 DEPARTMENTS IN LEAA REGION 8
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 114 DEPARTMENTS IN LEAA REGION 9
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 95 DEPARTMENTS IN LEAA REGION 10

RANKS BY LEAA REGION

	1	2	3	4	5	6	7	8	9	10
FLARES	5	10	4	10	9	9	10	6	7	10
FLOOD LIGHTS	7	11	11	11	10	10	9	10	8	9
FIRST AID KITS	2	6	6	4	4	4	4	4	9	3
SIRENS	6	4	5	5	5	5	7	5	3	6
LOUDSPEAKERS	10	9	8	8	6	6	3	8	5	8
FIRE EXTINGUISHERS	8	5	10	7	7	8	8	9	10	7
COMBINED SIREN/LIGHT/LOUDSPEAKER SYSTEM	1	3	1	1	1	1	1	1	1	1
FLASHING LIGHTS	4	2	2	2	2	2	2	2	2	2
SPOT LIGHTS	9	8	7	6	8	7	5	7	6	5
REFLECTORS	11	7	9	9	11	11	11	11	11	11
RESCUE EQUIPMENT	3	1	3	3	3	3	6	3	4	4

Table
II C-5

ITEMS WITH EXTREME RANK SUMS BY LEAA REGION
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	1 589, 778	2 667, 868	3 656, 855	4 583, 772	5 695, 900
FLARES	****	****	****	881.	****
FLOOD LIGHTS	843.	****	954.	883.	****
FIRST AID KITS	505.	****	633.	****	635.
SIRENS	****	****	****	****	****
LOUDSPEAKERS	****	938.	858.	802.	903.
FIRE EXTINGUISHERS	****	****	****	****	****
COMBINED SIREN/LIGHT/LOUDSPEAKER SYSTEM	488.	500.	473.	404.	468.
FLASHING LIGHTS	524.	506.	605.	455.	569.
SPOT LIGHTS	****	****	****	****	****
REFLECTORS	977.	****	****	924.	****
RESCUE EQUIPMENT	576.	610.	****	****	****

ITEMS WITH EXTREME RANK SUMS BY LEAA REGION
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	6 528, 707	7 505, 682	8 500, 675	9 589, 778	10 483, 656
FLARES	780.	699.	721.	****	660.
FLOOD LIGHTS	789.	711.	745.	822.	696.
FIRST AID KITS	****	461.	445.	****	445.
SIRENS	****	****	****	****	****
LOUDSPEAKERS	****	714.	****	****	697.
FIRE EXTINGUISHERS	****	****	****	****	****
COMBINED SIREN/LIGHT/LOUDSPEAKER SYSTEM	323.	358.	373.	408.	321.
FLASHING LIGHTS	410.	409.	426.	529.	391.
SPOT LIGHTS	****	****	****	****	****
REFLECTORS	887.	843.	856.	960.	799.
RESCUE EQUIPMENT	****	****	****	****	****

REGARDING EACH REGION AS A RESPONDENT, IF THE TEN RANKINGS WERE RANDOM,
THE RANK SUM OF AN ITEM WOULD LIE IN THE INTERVAL (32, 88)
95 PERCENT OF THE TIME. THE FOLLOWING ITEMS LIE OUTSIDE THIS INTERVAL:

FLOOD LIGHTS	96.
COMBINED SIREN/LIGHT/LOUDSPEAKER SYSTEM	18.
FLASHING LIGHTS	21.
REFLECTORS	105.

REGARDING EACH LEAA REGION AS A RESPONDENT,
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL.

REGARDING EACH DEPARTMENT TYPE AS A RESPONDENT, IF THE SEVEN RANKINGS WERE RANDOM,
THE RANK SUM OF AN ITEM WOULD LIE IN THE INTERVAL (19, 65)
95 PERCENT OF THE TIME. THE FOLLOWING ITEMS LIE OUTSIDE THIS INTERVAL:

FLOOD LIGHTS	70.
COMBINED SIREN/LIGHT/LOUDSPEAKER SYSTEM	12.
FLASHING LIGHTS	13.
REFLECTORS	76.

REGARDING EACH DEPARTMENT TYPE AS A RESPONDENT,
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL.

Table
II C-7

FREQUENCY DISTRIBUTION OF RANKS OF
EMERGENCY WARNING AND RESCUE EQUIPMENT BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
FLARES																
RANK 1	2	4.3	7	3.1	6	2.5	9	3.4	3	1.2	1	2.2	3	3.7	31	2.7
RANK 2	2	4.3	14	6.2	6	2.5	7	2.7	8	3.3	1	2.2	5	6.2	43	3.8
RANK 3	4	8.5	17	7.6	18	7.6	12	4.6	12	4.9	3	6.7	7	8.6	73	6.4
RANK 4	3	6.4	15	6.7	23	9.7	29	11.1	18	7.4	7	15.6	18	22.2	113	9.9
RANK 5	2	4.3	20	8.9	12	5.0	27	10.3	25	10.2	7	15.6	10	12.3	103	9.0
RANK 6	4	8.5	25	11.1	22	9.2	25	9.5	24	9.8	9	20.0	7	8.6	116	10.2
RANK 7	6	12.8	22	9.8	38	16.0	29	11.1	24	9.8	1	2.2	5	6.2	125	10.9
RANK 8	10	21.3	28	12.4	30	12.6	34	13.0	34	13.9	3	6.7	6	7.4	145	12.7
RANK 9	5	10.6	26	11.6	22	9.2	26	9.9	28	11.5	2	4.4	5	6.2	114	10.0
RANK 10	8	17.0	22	9.8	25	10.5	25	9.5	37	15.2	5	11.1	8	9.9	130	11.4
RANK 11	0	.0	16	7.1	22	9.2	35	13.4	26	10.7	6	13.3	6	7.4	111	9.7
NOT RANKED	1	2.1	13	5.8	14	5.9	4	1.5	5	2.0	0	.0	1	1.2	38	3.3
TIED WITH ONE OTHER ITEM	1	2.1	2	.9	0	.0	1	.4	2	.8	0	.0	0	.0	6	.5
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	4	1.8	5	2.1	2	.8	0	.0	0	.0	1	1.2	12	1.1
FLOOD LIGHTS																
RANK 1	0	.0	10	4.4	4	1.7	3	1.1	5	2.0	1	2.2	1	1.2	24	2.1
RANK 2	0	.0	11	4.9	6	2.5	10	3.8	10	4.1	1	2.2	1	1.2	39	3.4
RANK 3	1	2.1	11	4.9	13	5.5	10	3.8	7	2.9	1	2.2	1	1.2	44	3.9
RANK 4	0	.0	11	4.9	10	4.2	14	5.3	17	7.0	5	11.1	6	7.4	63	5.5
RANK 5	3	6.4	18	8.0	14	5.9	21	8.0	19	7.8	6	13.3	7	8.6	88	7.7
RANK 6	3	6.4	22	9.8	21	8.8	28	10.7	19	7.8	4	8.9	8	9.9	105	9.2
RANK 7	0	.0	26	11.6	19	8.0	25	9.5	30	12.3	4	8.9	6	7.4	110	9.6
RANK 8	7	14.9	18	8.0	29	12.2	30	11.5	44	18.0	9	20.0	11	13.6	148	13.0
RANK 9	13	27.7	32	14.2	29	12.2	37	14.1	34	13.9	3	6.7	11	13.6	159	13.9
RANK 10	12	25.5	24	10.7	36	15.1	45	17.2	32	13.1	10	22.2	13	16.0	172	15.1
RANK 11	6	12.8	23	10.2	39	16.4	32	12.2	22	9.0	1	2.2	14	17.3	137	12.0
NOT RANKED	2	4.3	19	8.4	18	7.6	7	2.7	5	2.0	0	.0	2	2.5	53	4.6
TIED WITH ONE OTHER ITEM	0	.0	1	.4	2	.8	3	1.1	1	.4	0	.0	0	.0	7	.6
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	3	1.3	1	.4	0	.0	0	.0	1	1.2	7	.6
FIRST AID KITS																
RANK 1	5	10.6	23	10.2	30	12.6	28	10.7	21	8.6	1	2.2	10	12.3	118	10.3
RANK 2	5	10.6	28	12.4	31	13.0	25	9.5	27	11.1	4	8.9	10	12.3	130	11.4
RANK 3	5	10.6	31	13.8	26	10.9	30	11.5	22	9.0	5	11.1	18	22.2	137	12.0
RANK 4	5	10.6	22	9.8	23	9.7	41	15.6	28	11.5	4	8.9	11	13.6	134	11.7
RANK 5	9	19.1	27	12.0	39	16.4	43	16.4	28	11.5	4	8.9	7	8.6	157	13.7
RANK 6	4	8.5	27	12.0	25	10.5	33	12.6	24	9.8	5	11.1	5	6.2	123	10.8
RANK 7	5	10.6	15	6.7	16	6.7	26	9.9	25	10.2	8	17.8	9	11.1	104	9.1
RANK 8	4	8.5	12	5.3	11	4.6	14	5.3	25	10.2	1	2.2	4	4.9	71	6.2
RANK 9	2	4.3	12	5.3	11	4.6	3	1.1	17	7.0	4	8.9	2	2.5	51	4.5
RANK 10	1	2.1	11	4.9	10	4.2	12	4.6	13	5.3	2	4.4	4	4.9	53	4.6
RANK 11	2	4.3	2	.9	5	2.1	4	1.5	9	3.7	6	13.3	0	.0	28	2.5
NOT RANKED	0	.0	15	6.7	11	4.6	3	1.1	5	2.0	1	2.2	1	1.2	36	3.2
TIED WITH ONE OTHER ITEM	0	.0	2	.9	1	.4	3	1.1	1	.4	0	.0	0	.0	7	.6
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	5	2.1	2	.8	0	.0	0	.0	1	1.2	11	1.0

Table
II C-7 cont.

FREQUENCY DISTRIBUTION OF RANKS OF
EMERGENCY WARNING AND RESCUE EQUIPMENT BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
SIRENS																
RANK 1	2	4.3	11	4.9	13	5.5	17	6.5	11	4.5	1	2.2	4	4.9	59	5.2
RANK 2	5	10.6	16	7.1	21	8.8	24	9.2	29	11.9	5	11.1	12	14.8	112	9.8
RANK 3	9	19.1	24	10.7	25	10.5	38	14.5	28	11.5	9	20.0	7	8.6	140	12.3
RANK 4	7	14.9	27	12.0	30	12.6	36	13.7	38	15.6	5	11.1	7	8.6	150	13.1
RANK 5	2	4.3	26	11.6	25	10.5	24	9.2	23	9.4	3	6.7	8	9.9	111	9.7
RANK 6	6	12.8	22	9.8	18	7.6	25	9.5	26	10.7	3	6.7	3	3.7	103	9.0
RANK 7	5	10.6	17	7.6	18	7.6	20	7.6	14	5.7	7	15.6	6	7.4	87	7.6
RANK 8	1	2.1	26	11.6	20	8.4	22	8.4	16	6.6	5	11.1	5	6.2	95	8.3
RANK 9	4	8.5	18	8.0	16	6.7	19	7.3	21	8.6	3	6.7	14	17.3	95	8.3
RANK 10	1	2.1	13	5.8	21	8.8	14	5.3	18	7.4	1	2.2	7	8.6	75	6.6
RANK 11	3	6.4	12	5.3	15	6.3	18	6.9	16	6.6	3	6.7	6	7.4	73	6.4
NOT RANKED	2	4.3	13	5.8	16	6.7	5	1.9	4	1.6	0	.0	2	2.5	42	3.7
TIED WITH ONE OTHER ITEM	0	.0	0	.0	1	.4	2	.8	0	.0	0	.0	0	.0	3	.3
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	5	2.1	2	.8	1	.4	0	.0	1	1.2	11	1.0
LOUDSPEAKERS																
RANK 1	1	2.1	4	1.8	13	5.5	2	.8	6	2.5	2	4.4	1	1.2	29	2.5
RANK 2	4	8.5	15	6.7	19	8.0	17	6.5	13	5.3	1	2.2	2	2.5	71	6.2
RANK 3	4	8.5	22	9.8	24	10.1	25	9.5	36	14.8	6	13.3	5	6.2	122	10.7
RANK 4	6	12.8	18	8.0	16	6.7	23	8.8	18	7.4	7	15.6	1	1.2	89	7.8
RANK 5	2	4.3	15	6.7	11	4.6	15	5.7	18	7.4	2	4.4	8	9.9	71	6.2
RANK 6	8	17.0	16	7.1	22	9.2	17	6.5	26	10.7	6	13.3	11	13.6	106	9.3
RANK 7	5	10.6	23	10.2	10	4.2	24	9.2	18	7.4	6	13.3	9	11.1	95	8.3
RANK 8	3	6.4	23	10.2	26	10.9	37	14.1	20	8.2	4	8.9	8	9.9	121	10.6
RANK 9	4	8.5	17	7.6	40	16.8	34	13.0	33	13.5	4	8.9	13	16.0	145	12.7
RANK 10	5	10.6	27	12.0	16	6.7	38	14.5	30	12.3	4	8.9	10	12.3	130	11.4
RANK 11	4	8.5	27	12.0	26	10.9	26	9.9	20	8.2	3	6.7	12	14.8	118	10.3
NOT RANKED	1	2.1	18	8.0	15	6.3	4	1.5	6	2.5	0	.0	1	1.2	45	3.9
TIED WITH ONE OTHER ITEM	0	.0	1	.4	1	.4	4	1.5	3	1.2	0	.0	1	1.2	10	.9
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	1	.4	5	2.1	0	.0	0	.0	0	.0	1	1.2	7	.6
FIRE EXTINGUISHERS																
RANK 1	1	2.1	4	1.8	11	4.6	4	1.5	2	.8	0	.0	1	1.2	23	2.0
RANK 2	3	6.4	18	8.0	16	6.7	15	5.1	11	4.5	2	4.4	4	4.9	70	6.1
RANK 3	5	10.6	26	11.6	24	10.1	26	9.9	28	11.5	2	4.4	10	12.3	121	10.6
RANK 4	7	14.9	30	13.3	36	15.1	21	8.0	21	8.6	6	13.3	9	11.1	130	11.4
RANK 5	5	10.6	22	9.8	29	12.2	35	13.4	36	14.8	4	8.9	9	11.1	140	12.3
RANK 6	5	10.6	18	8.0	30	12.6	38	14.5	23	9.4	1	2.2	8	9.9	123	10.8
RANK 7	10	21.3	24	10.7	25	10.5	33	12.6	33	13.5	4	8.9	14	17.3	143	12.5
RANK 8	5	10.6	20	8.9	15	6.3	27	10.3	28	11.5	7	15.6	9	11.1	111	9.7
RANK 9	4	8.5	17	7.6	15	6.3	26	9.9	17	7.0	5	11.1	6	7.4	90	7.9
RANK 10	0	.0	13	5.8	12	5.0	24	9.2	26	10.7	8	17.8	6	7.4	89	7.8
RANK 11	1	2.1	18	8.0	13	5.5	8	3.1	15	6.1	4	8.9	3	3.7	62	5.4
NOT RANKED	1	2.1	15	6.7	12	5.0	4	1.5	4	1.6	2	4.4	2	2.5	40	3.5
TIED WITH ONE OTHER ITEM	0	.0	4	1.8	2	.8	2	.8	1	.4	0	.0	0	.0	9	.8
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	0	.0	5	2.1	2	.8	1	.4	0	.0	1	1.2	9	.8

Table
II C-7cont.

FREQUENCY DISTRIBUTION OF RANKS OF
EMERGENCY WARNING AND RESCUE EQUIPMENT BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTA	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
COMBINED SIREN/LIGHT/LOUDSPEAKER SYSTEM																
RANK 1	20	42.6	72	32.0	84	35.3	111	42.4	110	45.1	17	37.8	22	27.2	436	38.2
RANK 2	6	12.8	24	10.7	28	11.8	39	14.9	39	16.0	11	24.4	16	19.8	163	14.3
RANK 3	4	8.5	18	8.0	21	8.8	24	9.2	22	9.0	3	6.7	7	8.6	99	8.7
RANK 4	2	4.3	10	4.4	19	8.0	25	9.5	15	6.1	2	4.4	6	7.4	79	6.9
RANK 5	5	10.6	17	7.6	13	5.5	8	3.1	8	3.3	2	4.4	5	6.2	58	5.1
RANK 6	1	2.1	12	5.3	11	4.6	9	3.4	4	1.6	2	4.4	4	4.9	43	3.8
RANK 7	2	4.3	12	5.3	8	3.4	7	2.7	10	4.1	1	2.2	4	4.9	44	3.9
RANK 8	4	8.5	12	5.3	13	5.5	6	2.3	11	4.5	2	4.4	5	6.2	53	4.6
RANK 9	1	2.1	13	5.8	11	4.6	8	3.1	7	2.9	2	4.4	3	3.7	45	3.9
RANK 10	2	4.3	15	6.7	11	4.6	12	4.6	9	3.7	1	2.2	2	2.5	52	4.6
RANK 11	0	.0	6	2.7	8	3.4	8	3.1	5	2.0	2	4.4	5	6.2	34	3.0
NOT RANKED	0	.0	14	6.2	11	4.6	5	1.9	4	1.6	0	.0	2	2.5	36	3.2
TIED WITH ONE OTHER ITEM	0	.0	3	1.3	1	.4	0	.0	0	.0	1	2.2	0	.0	5	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	4	1.7	2	.8	1	.4	0	.0	1	1.2	10	.9
FLASHING LIGHTS																
RANK 1	12	25.5	37	16.4	46	19.3	48	18.3	36	14.8	9	20.0	25	32.1	214	18.7
RANK 2	14	29.8	33	14.7	55	23.1	59	22.5	59	24.2	14	31.1	10	12.3	244	21.4
RANK 3	3	6.4	17	7.6	21	8.8	25	9.5	34	13.9	7	15.6	4	4.9	111	9.7
RANK 4	9	19.1	26	11.6	18	7.6	19	7.3	21	8.6	4	8.9	8	9.9	105	9.2
RANK 5	4	8.5	21	9.3	23	9.7	18	6.9	19	7.8	3	6.7	6	7.4	94	8.2
RANK 6	1	2.1	15	6.7	11	4.6	21	8.0	11	4.5	1	2.2	8	9.9	68	6.0
RANK 7	3	6.4	12	5.3	11	4.6	17	6.5	15	6.1	2	4.4	10	12.3	70	6.1
RANK 8	1	2.1	15	6.7	16	6.7	18	6.9	19	7.8	0	.0	3	3.7	72	6.3
RANK 9	0	.0	17	7.6	11	4.6	16	6.1	12	4.9	3	6.7	2	2.5	61	5.3
RANK 10	0	.0	12	5.3	12	5.0	11	4.2	8	3.3	2	4.4	3	3.7	48	4.2
RANK 11	0	.0	10	4.4	7	2.9	5	1.9	6	2.5	0	.0	0	.0	28	2.5
NOT RANKED	0	.0	10	4.4	7	2.9	5	1.9	4	1.6	0	.0	1	1.2	27	2.4
TIED WITH ONE OTHER ITEM	0	.0	0	.0	2	.8	0	.0	2	.8	0	.0	0	.0	4	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	4	1.8	4	1.7	2	.8	0	.0	0	.0	1	1.2	11	1.0
SPOT LIGHTS																
RANK 1	0	.0	7	3.1	12	5.0	13	5.0	6	2.5	3	6.7	2	2.5	43	3.8
RANK 2	3	6.4	20	8.9	16	6.7	26	9.9	22	9.0	3	6.7	7	8.6	97	8.5
RANK 3	5	10.6	21	9.3	34	14.3	38	14.5	27	11.1	5	11.1	12	14.8	142	12.4
RANK 4	3	6.4	30	13.3	19	8.0	25	9.5	28	11.5	2	4.4	6	7.4	113	9.9
RANK 5	8	17.0	23	10.2	28	11.8	35	13.4	31	12.7	6	13.3	9	11.1	140	12.3
RANK 6	2	4.3	21	9.3	26	10.9	19	7.3	33	13.5	9	20.0	12	14.8	122	10.7
RANK 7	4	8.5	29	12.9	31	13.0	35	13.4	31	12.7	4	8.9	9	11.1	143	12.5
RANK 8	7	14.9	23	10.2	23	9.7	23	8.8	21	8.6	5	11.1	12	14.8	114	10.0
RANK 9	3	6.4	17	7.6	15	6.3	28	10.7	17	7.0	4	8.9	3	3.7	87	7.6
RANK 10	5	10.6	13	5.8	11	4.6	10	3.8	14	5.7	1	2.2	6	7.4	61	5.3
RANK 11	5	10.6	8	3.6	8	3.4	5	1.9	10	4.1	3	6.7	2	2.5	41	3.6
NOT RANKED	2	4.3	13	5.8	15	6.3	5	1.9	4	1.6	1	2.2	1	1.2	41	3.6
TIED WITH ONE OTHER ITEM	0	.0	2	.9	1	.4	2	.8	0	.0	1	2.2	1	1.2	7	.6
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	5	2.1	2	.8	1	.4	0	.0	1	1.2	12	1.1

Table
II C-7 cont.

FREQUENCY DISTRIBUTION OF RANKS OF
EMERGENCY WARNING AND RESCUE EQUIPMENT BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
REFLECTORS																
RANK 1	0	.0	3	1.3	4	1.7	2	.8	1	.4	0	.0	1	1.2	11	1.0
RANK 2	2	4.3	3	1.3	4	1.7	7	2.7	7	2.9	1	2.2	2	2.5	26	2.3
RANK 3	1	2.1	8	3.6	0	.0	9	3.4	6	2.5	2	4.4	3	3.7	29	2.5
RANK 4	1	2.1	7	3.1	8	3.4	10	3.8	15	6.1	1	2.2	4	4.9	46	4.0
RANK 5	1	2.1	15	6.7	15	6.3	12	4.6	11	4.5	4	8.9	2	2.5	60	5.3
RANK 6	5	10.6	14	6.2	17	7.1	12	4.6	23	9.4	2	4.4	7	8.6	80	7.0
RANK 7	1	2.1	16	7.1	22	9.2	20	7.6	18	7.4	4	8.9	3	3.7	84	7.4
RANK 8	1	2.1	22	9.8	20	8.4	19	7.3	13	5.3	5	11.1	7	8.6	87	7.6
RANK 9	6	12.8	26	11.6	32	13.4	42	16.0	34	13.9	9	20.0	11	13.6	160	14.0
RANK 10	6	12.8	34	15.1	36	15.1	38	14.5	26	10.7	8	17.8	16	19.8	164	14.4
RANK 11	22	46.8	59	26.2	63	26.5	82	31.3	85	34.8	8	17.8	24	29.6	343	30.0
NOT RANKED	1	2.1	18	8.0	17	7.1	9	3.4	5	2.0	1	2.2	1	1.2	52	4.6
TIED WITH ONE OTHER ITEM	0	.0	0	.0	0	.0	4	1.5	1	.4	0	.0	0	.0	5	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	3	1.3	0	.0	0	.0	0	.0	0	.0	5	.4
RESCUE EQUIPMENT																
RANK 1	4	8.5	53	23.6	34	14.3	37	14.1	39	16.0	11	24.4	17	21.0	195	17.1
RANK 2	3	6.4	32	14.2	26	10.9	29	11.1	19	7.8	2	4.4	10	12.3	121	10.6
RANK 3	6	12.8	18	8.0	19	8.0	20	7.6	18	7.4	2	4.4	6	7.4	89	7.8
RANK 4	4	8.5	17	7.6	21	8.8	18	6.9	22	9.0	2	4.4	3	3.7	87	7.6
RANK 5	7	14.9	12	5.3	13	5.5	17	6.5	23	9.4	3	6.7	7	8.6	82	7.2
RANK 6	6	12.8	16	7.1	14	5.9	29	11.1	24	9.8	2	4.4	6	7.4	97	8.5
RANK 7	4	8.5	7	3.1	20	8.4	21	8.0	19	7.8	4	8.9	4	4.9	79	6.9
RANK 8	2	4.3	10	4.4	13	5.5	26	9.9	11	4.5	4	8.9	9	11.1	75	6.6
RANK 9	3	6.4	15	6.7	15	6.3	18	6.9	18	7.4	6	13.3	9	11.1	84	7.4
RANK 10	5	10.6	16	7.1	27	11.3	22	8.4	25	10.2	1	2.2	3	3.7	99	8.7
RANK 11	1	2.1	14	6.2	24	10.1	22	8.4	22	9.0	7	15.6	5	6.2	95	8.3
NOT RANKED	2	4.3	15	6.7	12	5.0	3	1.1	4	1.6	1	2.2	2	2.5	39	3.4
TIED WITH ONE OTHER ITEM	1	2.1	3	1.3	1	.4	5	1.9	1	.4	0	.0	0	.0	11	1.0
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	3	1.3	1	.4	0	.0	0	.0	1	1.2	8	.7

ANALYSIS FOR PROTECTIVE EQUIPMENT AND CLOTHING

Table
II D-1

NATIONAL RANKS

RAINWEAR	4
BOMB DISPOSAL DEVICES	6
GAS MASKS	3
BODY ARMOR	5
POLICE UNIFORM	1
VEHICLE ARMOR	10
HAND HELD SHIELDS	11
HIGH VISIBILITY CLOTHING OR PATCHES	8
BALLISTIC HELMETS	7
CRASH HELMETS	9
RIOT HELMETS	2

Table
II D-2

ITEMS WITH EXTREME RANK SUMS BY DEPARTMENT TYPE
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	STATE	COUNTY	CITY(1-9 OFFICERS)	CITY(10-49 OFFICERS)	CITY(50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
	221, 342	1182,1445	1257,1526	1411,1696	1308,1583	210, 329	395, 552
RAINWEAR	****	****	****	****	****	351.	328.
BOMB DISPOSAL DEVICES	****	****	****	****	****	****	661.
GAS MASKS	183.	****	****	****	****	****	****
BODY ARMOR	****	****	****	****	****	208.	****
POLICE UNIFORM	211.	778.	678.	851.	****	****	228.
VEHICLE ARMOR	353.	****	****	****	****	****	585.
HAND HELD SHIELDS	347.	****	****	****	****	****	586.
HIGH VISIBILITY CLOTHING OR PATCHES	****	****	****	****	****	362.	****
BALLISTIC HELMETS	****	****	****	****	****	****	****
CRASH HELMETS	389.	****	****	****	****	****	661.
RIOT HELMETS	173.	****	****	****	****	207.	319.

Table
II D-3

THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 47 STATE DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 219 COUNTY DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 232 CITY(1-9 OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 259 CITY(10-49 OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 241 CITY(50 OR MORE OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 45 FIFTY LARGEST CITIES DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 79 TOWNSHIP DEPARTMENTS.

RANKS BY DEPARTMENT TYPE

	STATE	COUNTY	CITY(1-9 OFFICERS)	CITY(10-49 OFFICERS)	CITY(50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
RAINWEAR	4	3	3	3	6	8	3
BOMB DISPOSAL DEVICES	8	7	8	8	4	3	11
GAS MASKS	3	5	5	4	5	5	4
BODY ARMOR	6	6	7	6	3	4	7
POLICE UNIFORM	2	1	1	1	1	1	1
VEHICLE ARMOR	11	10	10	0	9	0	8
HAND HELD SHIELDS	10	11	11	11	10	11	9
HIGH VISIBILITY CLOTHING OR PATCHES	5	4	4	7	11	10	6
BALLISTIC HELMETS	7	9	6	5	7	7	5
CRASH HELMETS	9	8	9	10	8	6	10
RIOT HELMETS	1	2	2	2	2	2	2

COMPOSITE RANKS FOR ALL CITIES

RAINWEAR	6
BOMB DISPOSAL DEVICES	3
GAS MASKS	5
BODY ARMOR	4
POLICE UNIFORM	1
VEHICLE ARMOR	0
HAND HELD SHIELDS	11
HIGH VISIBILITY CLOTHING OR PATCHES	10
BALLISTIC HELMETS	7
CRASH HELMETS	8
RIOT HELMETS	2

Table

II D-4

THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 113 DEPARTMENTS IN LEAA REGION 1
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 129 DEPARTMENTS IN LEAA REGION 2
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 125 DEPARTMENTS IN LEAA REGION 3
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 113 DEPARTMENTS IN LEAA REGION 4
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 133 DEPARTMENTS IN LEAA REGION 5
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 104 DEPARTMENTS IN LEAA REGION 6
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 98 DEPARTMENTS IN LEAA REGION 7
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 98 DEPARTMENTS IN LEAA REGION 8
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 114 DEPARTMENTS IN LEAA REGION 9
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 94 DEPARTMENTS IN LEAA REGION 10

RANKS BY LEAA REGION

	1	2	3	4	5	6	7	8	9	10
RAINWEAR	3	6	3	2	7	6	3	6	3	4
BOMB DISPOSAL DEVICES	5	4	4	8	4	4	6	7	8	3
GAS MASKS	2	3	7	6	5	3	8	4	5	7
BODY ARMOR	6	5	6	4	3	7	5	8	4	2
POLICE UNIFORM	1	1	1	1	1	1	1	1	1	1
VEHICLE ARMOR	11	11	9	7	10	11	10	11	10	10
HAND HELD SHIELDS	8	10	11	11	11	10	11	10	11	11
HIGH VISIBILITY CLOTHING OR PATCHES	9	9	5	10	6	9	4	5	9	9
BALLISTIC HELMETS	7	7	8	5	9	5	7	9	7	6
CRASH HELMETS	10	8	10	9	8	8	9	2	6	8
RIOT HELMETS	4	2	2	3	2	2	2	3	2	5

Table
II D-5

ITEMS WITH EXTREME RANK SUMS BY LEAA REGION
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	1 583, 772	2 673, 874	3 650, 849	4 583, 772	5 695, 900
RAINWEAR	530.	661.	583.	568.	****
BOMB DISPOSAL DEVICES	871.	966.	915.	858.	951.
GAS MASKS	507.	624.	611.	564.	660.
BODY ARMOR	****	****	****	****	****
POLICE UNIFORM	422.	466.	471.	406.	462.
VEHICLE ARMOR	813.	929.	914.	779.	956.
HAND HELD SHIELDS	798.	914.	913.	791.	984.
HIGH VISIBILITY CLOTHING OR PATCHES	****	****	****	791.	****
BALLISTIC HELMETS	****	****	****	****	****
CRASH HELMETS	906.	****	****	822.	****
RIOT HELMETS	509.	519.	583.	539.	554.

ITEMS WITH EXTREME RANK SUMS BY LEAA REGION
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	6 533, 714	7 500, 675	8 505, 682	9 589, 778	10 478, 649
RAINWEAR	****	430.	****	****	469.
BOMB DISPOSAL DEVICES	****	736.	721.	****	****
GAS MASKS	520.	****	****	474.	464.
BODY ARMOR	****	****	****	575.	****
POLICE UNIFORM	451.	280.	291.	520.	298.
VEHICLE ARMOR	762.	750.	724.	842.	706.
HAND HELD SHIELDS	751.	714.	737.	811.	660.
HIGH VISIBILITY CLOTHING OR PATCHES	736.	****	****	795.	****
BALLISTIC HELMETS	****	****	****	****	****
CRASH HELMETS	762.	737.	724.	861.	698.
RIOT HELMETS	449.	483.	444.	503.	****

Table
II D-6

REGARDING EACH REGION AS A RESPONDENT, IF THE TEN RANKINGS WERE RANDOM,
THE RANK SUM OF AN ITEM WOULD LIE IN THE INTERVAL (32, 88)
95 PERCENT OF THE TIME. THE FOLLOWING ITEMS LIE OUTSIDE THIS INTERVAL:

GAS MASKS	30.
POLICE UNIFORM	18.
VEHICLE ARMOR	98.
HAND HELD SHIELDS	100.
RIOT HELMETS	16.

REGARDING EACH LEAA REGION AS A RESPONDENT,
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL.

REGARDING EACH DEPARTMENT TYPE AS A RESPONDENT, IF THE SEVEN RANKINGS WERE RANDOM,
THE RANK SUM OF AN ITEM WOULD LIE IN THE INTERVAL (19, 65)
95 PERCENT OF THE TIME. THE FOLLOWING ITEMS LIE OUTSIDE THIS INTERVAL:

POLICE UNIFORM	10.
RIOT HELMETS	12.

REGARDING EACH DEPARTMENT TYPE AS A RESPONDENT,
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL.

Table
II D-7

FREQUENCY DISTRIBUTION OF RANKS OF
PROTECTIVE EQUIPMENT AND CLOTHING BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
RAINWEAR																
RANK 1	2	4.3	19	8.4	25	10.5	22	8.4	8	3.3	1	2.2	7	8.6	84	7.4
RANK 2	10	21.3	63	28.0	77	32.4	72	27.5	53	21.7	5	11.1	34	42.0	314	27.5
RANK 3	5	10.6	31	13.8	32	13.4	25	9.5	15	6.1	2	4.4	11	13.6	121	10.6
RANK 4	3	6.4	10	4.4	15	6.3	27	10.3	18	7.4	4	8.9	4	4.9	81	7.1
RANK 5	4	8.5	11	4.9	7	2.9	18	6.9	18	7.4	1	2.2	2	2.5	61	5.3
RANK 6	3	6.4	11	4.9	10	4.2	18	6.9	13	5.3	1	2.2	3	3.7	59	5.2
RANK 7	4	8.5	12	5.3	12	5.0	15	5.7	23	9.4	4	8.9	1	1.2	71	6.2
RANK 8	5	10.6	9	4.0	10	4.2	12	4.6	11	4.5	1	2.2	2	2.5	50	4.4
RANK 9	2	4.3	9	4.0	11	4.6	11	4.2	18	7.4	1	2.2	7	8.6	59	5.2
RANK 10	5	10.6	20	8.9	9	3.8	16	6.1	25	10.2	11	24.4	3	3.7	89	7.8
RANK 11	4	8.5	19	8.4	21	8.8	20	7.6	36	14.8	13	28.9	5	6.2	118	10.3
NOT RANKED	0	.0	11	4.9	9	3.8	6	2.3	6	2.5	1	2.2	2	2.5	35	3.1
TIED WITH ONE OTHER ITEM	0	.0	3	1.3	4	1.7	0	.0	3	1.2	0	.0	0	.0	10	.9
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	1	.4	3	1.3	2	.8	1	.4	0	.0	1	1.2	8	.7
BOMB DISPOSAL DEVICES																
RANK 1	4	8.5	16	7.1	7	2.9	10	3.8	30	12.3	7	15.6	2	2.5	76	6.7
RANK 2	2	4.3	9	4.0	8	3.4	8	3.1	15	6.1	3	6.7	4	4.9	49	4.3
RANK 3	2	4.3	12	5.3	8	3.4	9	3.4	17	7.0	3	6.7	0	.0	51	4.5
RANK 4	2	4.3	15	6.7	12	5.0	19	7.3	21	8.6	9	20.0	1	1.2	79	6.9
RANK 5	4	8.5	12	5.3	13	5.5	18	6.9	15	6.1	3	6.7	5	6.2	70	6.1
RANK 6	4	8.5	16	7.1	24	10.1	22	8.4	18	7.4	7	15.6	4	4.9	95	8.3
RANK 7	2	4.3	13	5.8	19	8.0	23	8.8	22	9.0	3	6.7	5	6.2	87	7.6
RANK 8	6	12.8	28	12.4	24	10.1	34	13.0	16	6.6	6	13.3	14	17.3	128	11.2
RANK 9	5	10.6	28	12.4	29	12.2	27	10.3	27	11.1	2	4.4	8	9.9	126	11.0
RANK 10	9	19.1	25	11.1	32	13.4	36	13.7	23	9.4	0	.0	15	18.5	140	12.3
RANK 11	5	10.6	32	14.2	46	19.3	47	17.9	33	13.5	2	4.4	19	23.5	184	16.1
NOT RANKED	2	4.3	19	8.4	16	6.7	9	3.4	7	2.9	0	.0	4	4.9	57	5.0
TIED WITH ONE OTHER ITEM	0	.0	3	1.3	1	.4	0	.0	1	.4	0	.0	0	.0	5	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	4	1.7	1	.4	1	.4	0	.0	1	1.2	10	.9
GAS MASKS																
RANK 1	3	6.4	13	5.8	11	4.6	19	7.3	13	5.3	3	6.7	5	6.2	67	5.9
RANK 2	12	25.5	30	13.3	20	8.4	31	11.8	24	9.8	8	17.8	4	4.9	129	11.3
RANK 3	6	12.8	35	15.6	26	10.9	37	14.1	50	20.5	5	11.1	11	13.6	170	14.9
RANK 4	10	21.3	39	17.3	39	16.4	36	13.7	35	14.3	2	4.4	9	11.1	170	14.9
RANK 5	8	17.0	27	12.0	34	14.3	42	16.0	43	17.6	8	17.8	11	13.6	173	15.1
RANK 6	4	8.5	18	8.0	28	11.8	34	13.0	26	10.7	2	4.4	13	16.0	125	10.9
RANK 7	2	4.3	15	6.7	25	10.5	20	7.6	17	7.0	7	15.6	14	17.3	100	8.8
RANK 8	1	2.1	10	4.4	13	5.5	7	2.7	15	6.1	3	6.7	2	2.5	51	4.5
RANK 9	0	.0	11	4.9	8	3.4	6	2.3	7	2.9	4	8.9	4	4.9	40	3.5
RANK 10	0	.0	7	3.1	12	5.0	18	6.9	6	2.5	3	6.7	3	3.7	49	4.3
RANK 11	1	2.1	2	.9	7	2.9	5	1.9	4	1.6	0	.0	1	1.2	20	1.8
NOT RANKED	0	.0	18	8.0	15	6.3	7	2.7	4	1.6	0	.0	4	4.9	48	4.2
TIED WITH ONE OTHER ITEM	0	.0	0	.0	3	1.3	0	.0	1	.4	0	.0	0	.0	4	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	2	.8	2	.8	1	.4	0	.0	1	1.2	8	.7

Table
II D-7 cont.

FREQUENCY DISTRIBUTION OF RANKS OF
PROTECTIVE EQUIPMENT AND CLOTHING BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
BODY ARMOR																
RANK 1	2	4.3	14	6.2	13	5.5	17	6.5	23	9.4	9	20.0	5	6.2	83	7.3
RANK 2	5	10.6	17	7.6	15	6.3	21	8.0	24	9.8	6	13.3	2	2.5	90	7.9
RANK 3	3	6.4	17	7.6	16	6.7	24	9.2	26	10.7	5	11.1	2	2.5	93	8.1
RANK 4	6	12.8	25	11.1	20	8.4	26	9.9	22	9.0	4	8.9	7	8.6	110	9.6
RANK 5	5	10.6	28	12.4	23	9.7	26	9.9	28	11.5	4	8.9	8	9.9	122	10.7
RANK 6	8	17.0	28	12.4	27	11.3	33	12.6	32	13.1	5	11.1	14	17.3	147	12.9
RANK 7	4	8.5	16	7.1	26	10.9	31	11.8	19	7.8	2	4.4	10	12.3	108	9.5
RANK 8	6	12.8	17	7.6	24	10.1	24	9.2	31	12.7	2	4.4	12	14.8	116	10.2
RANK 9	5	10.6	19	8.4	25	10.5	18	6.9	21	8.6	5	11.1	8	9.9	101	8.8
RANK 10	1	2.1	16	7.1	16	6.7	23	8.8	9	3.7	1	2.2	7	8.6	73	6.4
RANK 11	1	2.1	10	4.4	14	5.9	11	4.2	4	1.6	0	.0	2	2.5	42	3.7
NOT RANKED	1	2.1	18	8.0	19	8.0	8	3.1	5	2.0	2	4.4	4	4.9	57	5.0
TIED WITH ONE OTHER ITEM	0	.0	1	.4	1	.4	0	.0	2	.8	0	.0	0	.0	4	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	4	1.7	2	.8	0	.0	0	.0	1	1.2	10	.9
POLICE UNIFORM																
RANK 1	18	38.3	105	46.7	130	54.6	143	54.6	104	42.6	19	42.2	51	63.0	570	49.9
RANK 2	4	8.5	17	7.6	27	11.3	23	8.8	18	7.4	2	4.4	5	6.2	96	8.4
RANK 3	3	6.4	22	9.8	13	5.5	15	5.7	12	4.9	0	.0	5	6.2	70	6.1
RANK 4	3	6.4	10	4.4	13	5.5	6	2.3	7	2.9	1	2.2	1	1.2	41	3.6
RANK 5	1	2.1	11	4.9	5	2.1	11	4.2	9	3.7	2	4.4	1	1.2	40	3.5
RANK 6	0	.0	5	2.2	7	2.9	9	3.4	9	3.7	1	2.2	4	4.9	35	3.1
RANK 7	4	8.5	7	3.1	5	2.1	7	2.7	8	3.3	0	.0	0	.0	31	2.7
RANK 8	1	2.1	9	4.0	7	2.9	11	4.2	10	4.1	2	4.4	3	3.7	43	3.8
RANK 9	7	14.9	8	3.6	8	3.4	11	4.2	20	8.2	6	13.3	2	2.5	62	5.4
RANK 10	3	6.4	10	4.4	11	4.6	6	2.3	21	8.6	7	15.6	5	6.2	63	5.5
RANK 11	2	4.3	11	4.9	3	1.3	14	5.3	23	9.4	4	8.9	2	2.5	59	5.2
NOT RANKED	1	2.1	10	4.4	9	3.8	6	2.3	3	1.2	1	2.2	2	2.5	32	2.8
TIED WITH ONE OTHER ITEM	0	.0	4	1.8	3	1.3	0	.0	2	.8	0	.0	0	.0	9	.8
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	1	.4	2	.8	2	.8	1	.4	0	.0	1	1.2	7	.6
VEHICLE ARMOR																
RANK 1	1	2.1	3	1.3	4	1.7	3	1.1	6	2.5	0	.0	1	1.2	18	1.6
RANK 2	1	2.1	7	3.1	8	3.4	9	3.4	14	5.7	4	8.9	4	4.9	47	4.1
RANK 3	1	2.1	9	4.0	13	5.5	16	6.1	10	4.1	5	11.1	5	6.2	59	5.2
RANK 4	1	2.1	11	4.9	21	8.8	19	7.3	19	7.8	2	4.4	5	6.2	78	6.8
RANK 5	3	6.4	16	7.1	19	8.0	18	6.9	15	6.1	3	6.7	5	6.2	79	6.9
RANK 6	9	19.1	23	10.2	25	10.5	19	7.3	17	7.0	6	13.3	2	2.5	101	8.8
RANK 7	8	17.0	24	10.7	25	10.5	34	13.0	24	9.8	5	11.1	13	16.0	133	11.6
RANK 8	3	6.4	29	12.9	40	16.8	41	15.6	27	11.1	6	13.3	13	16.0	159	13.9
RANK 9	7	14.9	28	12.4	25	10.5	38	14.5	34	13.9	5	11.1	10	12.3	147	12.9
RANK 10	8	17.0	32	14.2	21	8.8	26	9.9	38	15.6	5	11.1	10	12.3	140	12.3
RANK 11	1	2.1	23	10.2	20	8.4	29	11.1	32	13.1	4	8.9	8	9.9	117	10.2
NOT RANKED	4	8.5	20	8.9	17	7.1	10	3.8	8	3.3	0	.0	5	6.2	64	5.6
TIED WITH ONE OTHER ITEM	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0	0	.0
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	4	1.7	1	.4	0	.0	0	.0	1	1.2	8	.7

Table
II D-7 cont.

FREQUENCY DISTRIBUTION OF RANKS OF
PROTECTIVE EQUIPMENT AND CLOTHING BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
HAND HELD SHIELDS																
RANK 1	0	.0	7	3.1	2	.8	4	1.5	3	1.2	0	.0	1	1.2	17	1.5
RANK 2	1	2.1	6	2.7	4	1.7	8	3.1	5	2.0	2	4.4	0	.0	26	2.3
RANK 3	4	8.5	12	5.3	8	3.4	15	5.7	6	2.5	3	6.7	1	1.2	49	4.3
RANK 4	2	4.3	19	8.4	12	5.0	14	5.3	13	5.3	5	11.1	6	7.4	71	6.2
RANK 5	4	8.5	25	11.1	25	10.5	22	8.4	24	9.8	4	8.9	11	13.6	115	10.1
RANK 6	2	4.3	21	9.3	22	9.2	32	12.2	29	11.9	6	13.3	8	9.9	120	10.5
RANK 7	8	17.0	34	15.1	33	13.9	30	11.5	43	17.6	1	2.2	13	16.0	162	14.2
RANK 8	8	17.0	23	10.2	36	15.1	44	16.8	35	14.3	6	13.3	9	11.1	161	14.1
RANK 9	9	19.1	29	12.9	38	16.0	40	15.3	26	10.7	5	11.1	14	17.3	161	14.1
RANK 10	3	6.4	18	8.0	22	9.2	25	9.5	37	15.2	2	4.4	8	9.9	115	10.1
RANK 11	3	6.4	11	4.9	18	7.6	18	6.9	19	7.8	10	22.2	6	7.4	85	7.4
NOT RANKED	3	6.4	20	8.9	18	7.6	10	3.8	4	1.6	1	2.2	4	4.9	60	5.3
TIED WITH ONE OTHER ITEM	0	.0	2	.9	0	.0	0	.0	2	.8	0	.0	0	.0	4	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	4	1.7	2	.8	0	.0	0	.0	1	1.2	9	.8
HIGH VISIBILITY CLOTHING OR PATCHES																
RANK 1	4	8.5	8	3.6	7	2.9	4	1.5	0	.0	0	.0	4	4.9	27	2.4
RANK 2	5	10.6	21	9.3	26	10.9	23	8.8	11	4.5	3	6.7	7	8.6	96	8.4
RANK 3	3	6.4	22	9.8	35	14.7	32	12.2	18	7.4	3	6.7	16	19.8	129	11.3
RANK 4	7	14.9	21	9.3	17	7.1	21	8.0	17	7.0	3	6.7	16	19.8	102	8.9
RANK 5	4	8.5	20	8.9	22	9.2	26	9.9	13	5.3	1	2.2	9	11.1	95	8.3
RANK 6	2	4.3	18	8.0	17	7.1	22	8.4	28	11.5	0	.0	2	2.5	89	7.8
RANK 7	2	4.3	19	8.4	22	9.2	20	7.6	19	7.8	2	4.4	1	1.2	85	7.4
RANK 8	4	8.5	21	9.3	15	6.3	20	7.6	36	14.8	6	13.3	9	11.1	111	9.7
RANK 9	1	2.1	24	10.7	24	10.1	38	14.5	33	13.5	9	20.0	7	8.6	136	11.9
RANK 10	10	21.3	20	8.9	23	9.7	23	8.8	33	13.5	9	20.0	3	3.7	121	10.6
RANK 11	4	8.5	13	5.8	14	5.9	23	8.8	29	11.9	7	15.6	4	4.9	94	8.2
NOT RANKED	1	2.1	18	8.0	16	6.7	10	3.8	7	2.9	2	4.4	3	3.7	57	5.0
TIED WITH ONE OTHER ITEM	1	2.1	3	1.3	1	.4	0	.0	2	.8	0	.0	0	.0	7	.6
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	1	.4	4	1.7	1	.4	1	.4	0	.0	1	1.2	8	.7
BALLISTIC HELMETS																
RANK 1	5	10.6	14	6.2	14	5.9	19	7.3	17	7.0	0	.0	7	8.6	76	6.7
RANK 2	2	4.3	15	6.7	18	7.6	16	6.1	24	9.8	4	8.9	5	6.2	84	7.4
RANK 3	2	4.3	11	4.9	21	8.8	13	5.0	22	9.0	6	13.3	5	6.2	80	7.0
RANK 4	6	12.8	22	9.8	27	11.3	25	9.5	19	7.8	2	4.4	5	6.2	106	9.3
RANK 5	6	12.8	27	12.0	21	8.8	21	8.0	33	13.5	6	13.3	9	11.1	123	10.8
RANK 6	5	10.6	26	11.6	22	9.2	32	12.2	14	5.7	10	22.2	12	14.8	121	10.6
RANK 7	6	12.8	26	11.6	24	10.1	32	12.2	30	12.3	9	20.0	9	11.1	136	11.9
RANK 8	6	12.8	18	8.0	20	8.4	29	11.1	23	9.4	2	4.4	7	8.6	105	9.2
RANK 9	4	8.5	15	6.7	21	8.8	25	9.5	21	8.6	3	6.7	5	6.2	94	8.2
RANK 10	2	4.3	24	10.7	21	8.8	32	12.2	14	5.7	2	4.4	12	14.8	107	9.4
RANK 11	2	4.3	10	4.4	12	5.0	9	3.4	20	8.2	1	2.2	1	1.2	55	4.8
NOT RANKED	1	2.1	17	7.6	17	7.1	9	3.4	7	2.9	0	.0	4	4.9	55	4.8
TIED WITH ONE OTHER ITEM	0	.0	1	.4	0	.0	0	.0	1	.4	0	.0	0	.0	2	.2
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	4	1.7	2	.8	1	.4	0	.0	1	1.2	10	.9

Table
II D-7 cont.

FREQUENCY DISTRIBUTION OF RANKS OF
PROTECTIVE EQUIPMENT AND CLOTHING BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
CRASH HELMETS																
RANK 1	0	.0	0	.0	1	.4	5	1.9	13	5.3	2	4.4	1	1.2	22	1.9
RANK 2	2	4.3	2	.9	5	2.1	5	1.9	19	7.8	4	8.9	0	.0	37	3.2
RANK 3	4	8.5	7	3.1	11	4.6	19	7.3	25	10.2	4	8.9	4	4.9	74	6.5
RANK 4	0	.0	8	3.6	7	2.9	19	7.3	31	12.7	8	17.8	5	6.2	78	6.8
RANK 5	2	4.3	9	4.0	15	6.3	19	7.3	21	8.6	3	6.7	5	6.2	74	6.5
RANK 6	7	14.9	18	8.0	19	8.0	14	5.3	25	10.2	3	6.7	8	9.9	94	8.2
RANK 7	2	4.3	22	9.8	11	4.6	21	8.0	13	5.3	9	20.0	5	6.2	83	7.3
RANK 8	4	8.5	26	11.6	22	9.2	19	7.3	23	9.4	6	13.3	4	4.9	104	9.1
RANK 9	3	6.4	22	9.8	17	7.1	24	9.2	20	8.2	3	6.7	9	11.1	98	8.6
RANK 10	3	6.4	23	10.2	38	16.0	38	14.5	22	9.0	3	6.7	9	11.1	136	11.9
RANK 11	19	40.4	70	31.1	76	31.9	70	26.7	26	10.7	0	.0	27	33.3	288	25.2
NOT RANKED	1	2.1	18	8.0	16	6.7	9	3.4	6	2.5	0	.0	4	4.9	54	4.7
TIED WITH ONE OTHER ITEM	1	2.1	3	1.3	1	.4	0	.0	1	.4	0	.0	0	.0	6	.5
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	5	2.1	1	.4	1	.4	0	.0	1	1.2	10	.9
RIOT HELMETS																
RANK 1	8	17.0	23	10.2	25	10.5	25	9.5	28	11.5	4	8.9	5	6.2	118	10.3
RANK 2	3	6.4	26	11.6	21	8.8	41	15.6	34	13.9	4	8.9	13	16.0	142	12.4
RANK 3	15	31.9	30	13.3	40	16.8	48	18.3	40	16.4	9	20.0	18	22.2	200	17.5
RANK 4	7	14.9	29	12.9	40	16.8	42	16.0	36	14.8	5	11.1	18	22.2	177	15.5
RANK 5	6	12.8	20	8.9	34	14.3	32	12.2	24	9.8	10	22.2	10	12.3	136	11.9
RANK 6	3	6.4	23	10.2	16	6.7	16	6.1	29	11.9	4	8.9	6	7.4	97	8.5
RANK 7	4	8.5	15	6.7	15	6.3	17	6.5	17	7.0	2	4.4	5	6.2	75	6.6
RANK 8	0	.0	14	6.2	6	2.5	10	3.8	11	4.5	5	11.1	1	1.2	47	4.1
RANK 9	1	2.1	15	6.7	11	4.6	13	5.0	9	3.7	1	2.2	2	2.5	52	4.6
RANK 10	0	.0	7	3.1	9	3.8	6	2.3	9	3.7	0	.0	1	1.2	32	2.8
RANK 11	0	.0	7	3.1	6	2.5	6	2.3	3	1.2	1	2.2	0	.0	23	2.0
NOT RANKED	0	.0	16	7.1	15	6.3	6	2.3	4	1.6	0	.0	2	2.5	43	3.8
TIED WITH ONE OTHER ITEM	0	.0	2	.9	0	.0	0	.0	1	.4	0	.0	0	.0	3	.3
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	5	2.1	2	.8	0	.0	0	.0	1	1.2	10	.9

Table
II E-1

NATIONAL RANKS

ALARM DISPLAYS IN DEPARTMENT	3
CLOSED CIRCUIT TV	5
LOW-LIGHT LEVEL CLOSED CIRCUIT TV	1
LENSES FOR NIGHT VISION SURVEILLANCE EQUIPMENT	7
STILL CAMERA EQUIPMENT FOR NIGHT VISION DEVICES	4
GENERAL PURPOSE LOCKS	8
SPECIAL LOCKING DEVICES FOR DETENTION CENTERS	9
NIGHT VISION SCOPE SUITABLE FOR RIFLES	6
HAND-HELD NIGHT VISION EQUIPMENT	2

Table
II E-2

ITEMS WITH EXTREME RANK SUMS BY DEPARTMENT TYPE
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	STATE	COUNTY	CITY(1-9 OFFICERS)	CITY(10-49 OFFICERS)	CITY(50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
	177, 272	937,1142	1018,1231	1170,1399	1099,1320	177, 272	308, 431
ALARM DISPLAYS IN DEPARTMENT	301.	882.	586.	704.	991.	****	192.
CLOSED CIRCUIT TV	****	****	****	****	****	****	****
LOW-LIGHT LEVEL CLOSED CIRCUIT TV	****	****	****	****	893.	159.	****
LENSES FOR NIGHT VISION SURVEILLANCE EQUIPMENT	****	****	****	****	****	****	****
STILL CAMERA EQUIPMENT FOR NIGHT VISION DEVICES	167.	****	988.	****	****	****	****
GENERAL PURPOSE LOCKS	306.	****	****	****	****	323.	****
SPECIAL LOCKING DEVICES FOR DETENTION CENTERS	348.	****	****	****	****	308.	438.
NIGHT VISION SCOPE SUITABLE FOR RIFLES	129.	****	****	****	****	****	****
HAND-HELD NIGHT VISION EQUIPMENT	149.	****	****	****	****	****	****

Table
II E-3

THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 45 STATE DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0003 PERCENT LEVEL FOR THE 208 COUNTY DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 225 CITY(1-9 OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 257 CITY(10-49 OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 242 CITY(50 OR MORE OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 45 FIFTY LARGEST CITIES DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 74 TOWNSHIP DEPARTMENTS.

RANKS BY DEPARTMENT TYPE

	STATE	COUNTY	CITY(1-9 OFFICERS)	CITY(10-49 OFFICERS)	CITY(50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
ALARM DISPLAYS IN DEPARTMENT	7	3	1	1	2	6	1
CLOSED CIRCUIT TV	3	9	8	3	4	3	6
LOW-LIGHT LEVEL CLOSED CIRCUIT TV	5	1	7	2	1	2	2
LENSES FOR NIGHT VISION SURVEILLANCE EQUIPMENT	6	8	4	6	6	5	8
STILL CAMERA EQUIPMENT FOR NIGHT VISION DEVICES	4	5	3	4	7	4	3
GENERAL PURPOSE LOCKS	8	2	2	8	9	9	5
SPECIAL LOCKING DEVICES FOR DETENTION CENTERS	9	7	9	9	8	8	4
NIGHT VISION SCOPE SUITABLE FOR RIFLES	1	6	6	7	5	7	9
HAND-HELD NIGHT VISION EQUIPMENT	2	4	5	5	3	1	7

COMPOSITE RANKS FOR ALL CITIES

ALARM DISPLAYS IN DEPARTMENT	3
CLOSED CIRCUIT TV	4
LOW-LIGHT LEVEL CLOSED CIRCUIT TV	1
LENSES FOR NIGHT VISION SURVEILLANCE EQUIPMENT	6
STILL CAMERA EQUIPMENT FOR NIGHT VISION DEVICES	5
GENERAL PURPOSE LOCKS	8
SPECIAL LOCKING DEVICES FOR DETENTION CENTERS	9
NIGHT VISION SCOPE SUITABLE FOR RIFLES	7
HAND-HELD NIGHT VISION EQUIPMENT	2

Table
II E-4

THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 111 DEPARTMENTS IN LEAA REGION 1
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 124 DEPARTMENTS IN LEAA REGION 2
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 123 DEPARTMENTS IN LEAA REGION 3
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 111 DEPARTMENTS IN LEAA REGION 4
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 131 DEPARTMENTS IN LEAA REGION 5
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 101 DEPARTMENTS IN LEAA REGION 6
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 96 DEPARTMENTS IN LEAA REGION 7
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 95 DEPARTMENTS IN LEAA REGION 8
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 114 DEPARTMENTS IN LEAA REGION 9
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 90 DEPARTMENTS IN LEAA REGION 10

RANKS BY LEAA REGION

	1	2	3	4	5	6	7	8	9	10
ALARM DISPLAYS IN DEPARTMENT	1	3	4	1	4	1	1	2	5	2
CLOSED CIRCUIT TV	4	4	7	6	2	7	7	6	3	3
LOW-LIGHT LEVEL CLOSED CIRCUIT TV	2	5	1	4	1	4	5	1	1	1
LENSES FOR NIGHT VISION SURVEILLANCE EQUIPMENT	3	6	5	7	7	6	2	4	9	7
STILL CAMERA EQUIPMENT FOR NIGHT VISION DEVICES	8	2	3	5	5	5	3	3	7	5
GENERAL PURPOSE LOCKS	9	8	6	9	9	8	8	8	2	9
SPECIAL LOCKING DEVICES FOR DETENTION CENTERS	7	9	9	8	8	9	9	9	6	8
NIGHT VISION SCOPE SUITABLE FOR RIFLES	6	7	8	2	6	2	6	7	8	4
HAND-HELD NIGHT VISION EQUIPMENT	5	1	2	3	3	3	4	5	4	6

ITEMS WITH EXTREME RANK SUMS BY LEAA REGION
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	1 479, 630	2 540, 699	3 535, 694	4 479, 630	5 573, 736
ALARM DISPLAYS IN DEPARTMENT	325.	393.	465.	374.	483.
CLOSED CIRCUIT TV	****	****	****	****	****
LOW-LIGHT LEVEL CLOSED CIRCUIT TV	****	****	****	****	****
LENSES FOR NIGHT VISION SURVEILLANCE EQUIPMENT	****	****	****	****	****
STILL CAMERA EQUIPMENT FOR NIGHT VISION DEVICES	****	****	516.	****	****
GENERAL PURPOSE LOCKS	648.	708.	708.	709.	780.
SPECIAL LOCKING DEVICES FOR DETENTION CENTERS	668.	729.	778.	715.	809.
NIGHT VISION SCOPE SUITABLE FOR RIFLES	649.	708.	****	****	****
HAND-HELD NIGHT VISION EQUIPMENT	****	****	****	****	****

ITEMS WITH EXTREME RANK SUMS BY LEAA REGION
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	6 433, 576	7 410, 549	8 405, 544	9 493, 646	10 382, 517
ALARM DISPLAYS IN DEPARTMENT	388.	335.	350.	482.	330.
CLOSED CIRCUIT TV	****	****	****	****	****
LOW-LIGHT LEVEL CLOSED CIRCUIT TV	****	****	****	438.	363.
LENSES FOR NIGHT VISION SURVEILLANCE EQUIPMENT	****	****	****	****	****
STILL CAMERA EQUIPMENT FOR NIGHT VISION DEVICES	****	****	****	****	****
GENERAL PURPOSE LOCKS	658.	563.	****	700.	562.
SPECIAL LOCKING DEVICES FOR DETENTION CENTERS	691.	610.	585.	723.	569.
NIGHT VISION SCOPE SUITABLE FOR RIFLES	415.	****	****	****	****
HAND-HELD NIGHT VISION EQUIPMENT	406.	****	****	****	****

Table
II E-6

REGARDING EACH REGION AS A RESPONDENT, IF THE TEN RANKINGS WERE RANDOM,
THE RANK SUM OF AN ITEM WOULD LIE IN THE INTERVAL (27, 73)
95 PERCENT OF THE TIME. THE FOLLOWING ITEMS LIE OUTSIDE THIS INTERVAL:

LOW-LIGHT LEVEL CLOSED CIRCUIT TV	24.
GENERAL PURPOSE LOCKS	80.
SPECIAL LOCKING DEVICES FOR DETENTION CENTERS	86.

REGARDING EACH LEAA REGION AS A RESPONDENT,
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL.

REGARDING EACH DEPARTMENT TYPE AS A RESPONDENT, IF THE SEVEN RANKINGS WERE RANDOM,
THE RANK SUM OF AN ITEM WOULD LIE IN THE INTERVAL (16, 54)
95 PERCENT OF THE TIME. THE FOLLOWING ITEMS LIE OUTSIDE THIS INTERVAL:

SPECIAL LOCKING DEVICES FOR DETENTION CENTERS	57.

REGARDING EACH DEPARTMENT TYPE AS A RESPONDENT,
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0230 PERCENT LEVEL.

Table
II E-7

FREQUENCY DISTRIBUTION OF RANKS OF
SECURITY EQUIPMENT BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
ALARM DISPLAYS IN DEPARTMENT																
RANK 1	3	6.4	64	28.4	123	51.7	152	58.0	84	34.4	5	11.1	42	51.9	473	41.4
RANK 2	2	4.3	14	6.2	22	9.2	13	5.0	22	9.0	0	.0	6	7.4	79	6.9
RANK 3	1	2.1	19	8.4	18	7.6	23	8.8	26	10.7	6	13.3	8	9.9	101	8.8
RANK 4	0	.0	19	8.4	14	5.9	6	2.3	10	4.1	2	4.4	3	3.7	54	4.7
RANK 5	5	10.6	18	8.0	15	6.3	13	5.0	11	4.5	1	2.2	3	3.7	66	5.8
RANK 6	0	.0	12	5.3	8	3.4	14	5.3	11	4.5	8	17.8	3	3.7	56	4.9
RANK 7	12	25.5	16	7.1	5	2.1	17	6.5	27	11.1	8	17.8	4	4.9	89	7.8
RANK 8	11	23.4	13	5.8	4	1.7	8	3.1	11	4.5	4	8.9	2	2.5	53	4.6
RANK 9	9	19.1	26	11.6	11	4.6	11	4.2	35	14.3	11	24.4	1	1.2	104	9.1
NOT RANKED	4	8.5	24	10.7	18	7.6	5	1.9	7	2.9	0	.0	9	11.1	67	5.9
TIED WITH ONE OTHER ITEM	0	.0	2	.9	1	.4	2	.8	0	.0	0	.0	0	.0	5	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	0	.0	3	1.3	1	.4	0	.0	0	.0	1	1.2	5	.4
CLOSED CIRCUIT TV																
RANK 1	5	10.6	17	7.6	6	2.5	16	6.1	25	10.2	7	15.6	5	6.2	81	7.1
RANK 2	4	8.5	24	10.7	14	5.9	40	15.3	41	16.8	7	15.6	5	6.2	135	11.8
RANK 3	3	6.4	20	8.9	19	8.0	22	8.4	29	11.9	4	8.9	7	8.6	104	9.1
RANK 4	4	8.5	16	7.1	17	7.1	32	12.2	25	10.2	5	11.1	8	9.9	107	9.4
RANK 5	8	17.0	23	10.2	22	9.2	31	11.8	32	13.1	7	15.6	7	8.6	130	11.4
RANK 6	11	23.4	25	11.1	24	10.1	19	7.3	35	14.3	4	8.9	6	7.4	124	10.9
RANK 7	5	10.6	25	11.1	26	10.9	29	11.1	18	7.4	5	11.1	12	14.8	120	10.5
RANK 8	2	4.3	31	13.8	52	21.8	22	8.4	18	7.4	5	11.1	8	9.9	138	12.1
RANK 9	1	2.1	21	9.3	34	14.3	35	13.4	16	6.6	1	2.2	10	12.3	118	10.3
NOT RANKED	4	8.5	23	10.2	24	10.1	16	6.1	5	2.0	0	.0	13	16.0	85	7.4
TIED WITH ONE OTHER ITEM	0	.0	1	.4	2	.8	1	.4	0	.0	0	.0	0	.0	4	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	1	.4	4	1.7	1	.4	1	.4	0	.0	1	1.2	8	.7
LOW-LIGHT LEVEL CLOSED CIRCUIT TV																
RANK 1	3	6.4	30	13.3	8	3.4	25	9.5	55	22.5	12	26.7	5	6.2	138	12.1
RANK 2	6	12.8	27	12.0	21	8.8	56	21.4	48	19.7	8	17.8	10	12.3	176	15.4
RANK 3	9	19.1	19	8.4	17	7.1	30	11.5	32	13.1	5	11.1	8	9.9	120	10.5
RANK 4	5	10.6	18	8.0	28	11.8	18	6.9	24	9.8	6	13.3	7	8.6	106	9.3
RANK 5	6	12.8	16	7.1	19	8.0	22	8.4	24	9.8	4	8.9	8	9.9	99	8.7
RANK 6	6	12.8	21	9.3	20	8.4	29	11.1	17	7.0	2	4.4	9	11.1	104	9.1
RANK 7	5	10.6	14	6.2	34	14.3	16	6.1	15	6.1	5	11.1	8	9.9	97	8.5
RANK 8	2	4.3	27	12.0	29	12.2	28	10.7	11	4.5	2	4.4	10	12.3	109	9.5
RANK 9	0	.0	30	13.3	38	16.0	21	8.0	12	4.9	1	2.2	3	3.7	105	9.2
NOT RANKED	5	10.6	23	10.2	24	10.1	17	6.5	6	2.5	0	.0	13	16.0	88	7.7
TIED WITH ONE OTHER ITEM	0	.0	1	.4	1	.4	0	.0	0	.0	0	.0	0	.0	2	.2
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	1	.4	4	1.7	2	.8	1	.4	0	.0	1	1.2	9	.8

Table
II E-7 cont.

FREQUENCY DISTRIBUTION OF RANKS OF SECURITY EQUIPMENT BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
LENSES FOR NIGHT VISION SURVEILLANCE EQUIPMENT																
RANK 1	2	4.3	3	1.3	10	4.2	12	4.6	10	4.1	4	8.9	5	6.2	46	4.0
RANK 2	4	8.5	20	8.9	27	11.3	24	9.2	25	10.2	7	15.6	6	7.4	113	9.9
RANK 3	4	8.5	23	10.2	36	15.1	34	13.0	38	15.6	3	6.7	6	7.4	144	12.6
RANK 4	13	27.7	44	19.6	30	12.6	48	18.3	51	20.9	12	26.7	15	18.5	213	18.7
RANK 5	8	17.0	24	10.7	33	13.9	39	14.9	44	18.0	6	13.3	9	11.1	163	14.3
RANK 6	6	12.8	27	12.0	27	11.3	34	13.0	31	12.7	7	15.6	12	14.8	144	12.6
RANK 7	4	8.5	32	14.2	23	9.7	32	12.2	24	9.8	1	2.2	7	8.6	123	10.8
RANK 8	1	2.1	17	7.6	12	5.0	9	3.4	8	3.3	3	6.7	4	4.9	54	4.7
RANK 9	0	.0	10	4.4	17	7.1	14	5.3	5	2.0	2	4.4	7	8.6	55	4.8
NOT RANKED	5	10.6	25	11.1	23	9.7	16	6.1	8	3.3	0	.0	10	12.3	87	7.6
TIED WITH ONE OTHER ITEM	0	.0	0	.0	1	.4	1	.4	1	.4	0	.0	1	1.2	4	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	5	2.1	1	.4	0	.0	0	.0	1	1.2	9	.8
STILL CAMERA EQUIPMENT FOR NIGHT VISION DEVICES																
RANK 1	6	12.8	17	7.6	15	6.3	13	5.0	12	4.9	4	8.9	5	6.2	72	6.3
RANK 2	4	8.5	23	10.2	38	16.0	35	13.4	20	8.2	5	11.1	11	13.6	136	11.9
RANK 3	13	27.7	42	18.7	35	14.7	42	16.0	39	16.0	9	20.0	7	8.6	187	16.4
RANK 4	9	19.1	29	12.9	33	13.9	40	15.3	51	20.9	8	17.8	15	18.5	185	16.2
RANK 5	4	8.5	25	11.1	27	11.3	40	15.3	43	17.6	13	28.9	9	11.1	161	14.1
RANK 6	6	12.8	19	8.4	21	8.8	32	12.2	33	13.5	1	2.2	7	8.6	119	10.4
RANK 7	1	2.1	26	11.6	27	11.3	22	8.4	17	7.0	2	4.4	8	9.9	103	9.0
RANK 8	1	2.1	6	2.7	9	3.8	19	7.3	14	5.7	2	4.4	3	3.7	54	4.7
RANK 9	0	.0	15	6.7	9	3.8	4	1.5	10	4.1	1	2.2	3	3.7	42	3.7
NOT RANKED	3	6.4	23	10.2	24	10.1	15	5.7	5	2.0	0	.0	13	16.0	83	7.3
TIED WITH ONE OTHER ITEM	0	.0	2	.9	1	.4	2	.8	1	.4	0	.0	0	.0	6	.5
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	1	.4	5	2.1	1	.4	0	.0	0	.0	1	1.2	8	.7
GENERAL PURPOSE LOCKS																
RANK 1	0	.0	19	8.4	20	8.4	10	3.8	9	3.7	2	4.4	7	8.6	67	5.9
RANK 2	1	2.1	17	7.6	32	13.4	24	9.2	17	7.0	1	2.2	13	16.0	105	9.2
RANK 3	2	4.3	18	8.0	18	7.6	12	4.6	6	2.5	0	.0	8	9.9	64	5.6
RANK 4	2	4.3	17	7.6	21	8.8	24	9.2	13	5.3	2	4.4	3	3.7	82	7.2
RANK 5	6	12.8	22	9.8	18	7.6	27	10.3	12	4.9	4	8.9	3	3.7	92	8.1
RANK 6	6	12.8	20	8.9	30	12.6	25	9.5	21	8.6	5	11.1	3	3.7	110	9.6
RANK 7	4	8.5	21	9.3	23	9.7	29	11.1	36	14.8	5	11.1	6	7.4	124	10.9
RANK 8	14	29.8	32	14.2	20	8.4	56	21.4	74	30.3	8	17.8	12	14.8	216	18.9
RANK 9	7	14.9	38	16.9	36	15.1	45	17.2	51	20.9	18	40.0	14	17.3	209	18.3
NOT RANKED	5	10.6	21	9.3	20	8.4	10	3.8	5	2.0	0	.0	12	14.8	73	6.4
TIED WITH ONE OTHER ITEM	0	.0	1	.4	1	.4	2	.8	0	.0	0	.0	0	.0	4	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	1	.4	3	1.3	1	.4	1	.4	0	.0	1	1.2	7	.6

Table
II E-7 cont.

FREQUENCY DISTRIBUTION OF RANKS OF
SECURITY EQUIPMENT BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
SPECIAL LOCKING DEVICES FOR DETENTION CENTERS																
RANK 1	1	2.1	21	9.3	3	1.3	1	.4	10	4.1	2	4.4	3	3.7	41	3.6
RANK 2	1	2.1	21	9.3	17	7.1	14	5.3	12	4.9	2	4.4	6	7.4	73	6.4
RANK 3	1	2.1	23	10.2	19	8.0	27	10.3	15	6.1	2	4.4	8	9.9	95	8.3
RANK 4	2	4.3	12	5.3	14	5.9	16	6.1	7	2.9	0	.0	5	6.2	56	4.9
RANK 5	0	.0	21	9.3	21	8.8	17	6.5	15	6.1	2	4.4	6	7.4	82	7.2
RANK 6	1	2.1	24	10.7	30	12.6	25	9.5	19	7.8	4	8.9	11	13.6	114	10.0
RANK 7	4	8.5	26	11.6	32	13.4	32	12.2	40	16.4	9	20.0	5	6.2	148	13.0
RANK 8	9	19.1	27	12.0	40	16.8	49	18.7	53	21.7	17	37.8	12	14.8	207	18.1
RANK 9	23	48.9	24	10.7	41	17.2	63	24.0	64	26.2	7	15.6	12	14.8	234	20.5
NOT RANKED	5	10.6	26	11.6	21	8.8	18	6.9	9	3.7	0	.0	13	16.0	92	8.1
TIED WITH ONE OTHER ITEM	0	.0	1	.4	1	.4	1	.4	0	.0	0	.0	0	.0	3	.3
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	1	.4	4	1.7	2	.8	0	.0	0	.0	1	1.2	8	.7
NIGHT VISION SCOPE SUITABLE FOR RIFLES																
RANK 1	18	38.3	20	8.9	11	4.6	12	4.6	18	7.4	3	6.7	4	4.9	86	7.5
RANK 2	8	17.0	29	12.9	22	9.2	21	8.0	25	10.2	8	17.8	8	9.9	121	10.6
RANK 3	5	10.6	15	6.7	30	12.6	23	8.8	22	9.0	7	15.6	6	7.4	108	9.5
RANK 4	4	8.5	22	9.8	27	11.3	32	12.2	26	10.7	4	8.9	5	6.2	120	10.5
RANK 5	2	4.3	29	12.9	30	12.6	27	10.3	31	12.7	1	2.2	12	14.8	132	11.6
RANK 6	2	4.3	19	8.4	25	10.5	37	14.1	32	13.1	11	24.4	8	9.9	134	11.7
RANK 7	3	6.4	21	9.3	21	8.8	33	12.6	34	13.9	5	11.1	11	13.6	128	11.2
RANK 8	1	2.1	29	12.9	29	12.2	21	8.0	25	10.2	4	8.9	10	12.3	119	10.4
RANK 9	0	.0	18	8.0	19	8.0	38	14.5	24	9.8	2	4.4	7	8.6	108	9.5
NOT RANKED	4	8.5	23	10.2	24	10.1	18	6.9	7	2.9	0	.0	10	12.3	86	7.5
TIED WITH ONE OTHER ITEM	0	.0	2	.9	2	.8	0	.0	1	.4	0	.0	1	1.2	6	.5
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	0	.0	4	1.7	2	.8	1	.4	0	.0	1	1.2	8	.7
HAND-HELD NIGHT VISION EQUIPMENT																
RANK 1	7	14.9	19	8.4	30	12.6	20	7.6	19	7.8	6	13.3	6	7.4	107	9.4
RANK 2	15	31.9	29	12.9	23	9.7	25	9.5	31	12.7	7	15.6	6	7.4	136	11.9
RANK 3	7	14.9	23	10.2	19	8.0	37	14.1	33	13.5	9	20.0	12	14.8	140	12.3
RANK 4	5	10.6	24	10.7	30	12.6	31	11.8	30	12.3	6	13.3	8	9.9	134	11.7
RANK 5	2	4.3	25	11.1	27	11.3	26	9.9	28	11.5	7	15.6	12	14.8	127	11.1
RANK 6	3	6.4	32	14.2	24	10.1	28	10.7	33	13.5	3	6.7	9	11.1	132	11.6
RANK 7	3	6.4	16	7.1	17	7.1	31	11.8	24	9.8	5	11.1	5	6.2	101	8.8
RANK 8	0	.0	16	7.1	18	7.6	32	12.2	22	9.0	0	.0	5	6.2	93	8.1
RANK 9	1	2.1	20	8.9	28	11.8	15	5.7	18	7.4	2	4.4	7	8.6	91	8.0
NOT RANKED	4	8.5	21	9.3	22	9.2	17	6.5	6	2.5	0	.0	11	13.6	81	7.1
TIED WITH ONE OTHER ITEM	0	.0	2	.9	2	.8	1	.4	1	.4	0	.0	0	.0	6	.5
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	1	.4	4	1.7	1	.4	1	.4	0	.0	1	1.2	8	.7

ANALYSIS FOR VEHICLES

Table
II F-1

NATIONAL RANKS

MOBILE COMMUNICATIONS/COMMAND/CONTROL VEHICLES	2
SCOOTERS	6
MOTORCYCLES	4
HELICOPTERS	5
OTHER AIRCRAFT	8
PATROLCARS	1
BOATS AND OTHER WATERCRAFT	7
OTHER LAND VEHICLES	3

Table
II F-2

ITEMS WITH EXTREME RANK SUMS BY DEPARTMENT TYPE
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	STATE	COUNTY	CITY(1-9 OFFICERS)	CITY(10-49 OFFICERS)	CITY(50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
	168, 253	875,1058	957,1148	1064,1265	986,1181	160, 243	295, 406
MOBILE COMMUNICATIONS/COMMAND/CONTROL VEHICLES	125.	645.	709.	728.	706.	****	218.
SCOOTERS	347.	****	****	****	****	****	415.
MOTORCYCLES	257.	****	****	****	929.	157.	****
HELICOPTERS	****	****	****	****	****	****	468.
OTHER AIRCRAFT	****	****	****	****	****	307.	556.
PATROLCARS	65.	383.	299.	362.	381.	79.	105.
BOATS AND OTHER WATERCRAFT	284.	****	****	****	****	299.	432.
OTHER LAND VEHICLES	****	766.	813.	854.	838.	****	270.

Table
II F-3

THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 47 STATE DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 215 COUNTY DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 234 CITY(1-9 OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 259 CITY(10-49 OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 241 CITY(50 OR MORE OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 45 FIFTY LARGEST CITIES DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 78 TOWNSHIP DEPARTMENTS.

RANKS BY DEPARTMENT TYPE

	STATE	COUNTY	CITY(1-9 OFFICERS)	CITY(10-49 OFFICERS)	CITY(50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
MOBILE COMMUNICATIONS/COMMAND/CONTROL VEHICLES	2	2	3	2	2	4	2
SCOOTERS	8	7	6	5	5	3	5
MOTORCYCLES	5	6	4	4	3	2	4
HELICOPTERS	3	4	7	6	6	6	7
OTHER AIRCRAFT	4	8	8	8	8	8	8
PATROLCARS	1	1	1	1	1	1	1
BOATS AND OTHER WATERCRAFT	7	5	5	7	7	7	6
OTHER LAND VEHICLES	6	3	2	3	4	5	3

COMPOSITE RANKS FOR ALL CITIES

MOBILE COMMUNICATIONS/COMMAND/CONTROL VEHICLES	2
SCOOTERS	5
MOTORCYCLES	4
HELICOPTERS	6
OTHER AIRCRAFT	8
PATROLCARS	1
BOATS AND OTHER WATERCRAFT	7
OTHER LAND VEHICLES	3

Table
II F-4

THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 113 DEPARTMENTS IN LEAA REGION 1
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 127 DEPARTMENTS IN LEAA REGION 2
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 124 DEPARTMENTS IN LEAA REGION 3
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 113 DEPARTMENTS IN LEAA REGION 4
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 133 DEPARTMENTS IN LEAA REGION 5
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 102 DEPARTMENTS IN LEAA REGION 6
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 98 DEPARTMENTS IN LEAA REGION 7
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 99 DEPARTMENTS IN LEAA REGION 8
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 115 DEPARTMENTS IN LEAA REGION 9
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 95 DEPARTMENTS IN LEAA REGION 10

RANKS BY LEAA REGION

	1	2	3	4	5	6	7	8	9	10
MOBILE COMMUNICATIONS/COMMAND/CONTROL VEHICLES	2	3	3	2	2	2	2	2	2	2
SCOOTERS	5	2	5	6	7	6	5	7	7	7
MOTORCYCLES	4	4	4	3	5	4	4	3	3	4
HELICOPTERS	7	7	6	5	4	5	6	5	4	3
OTHER AIRCRAFT	8	8	8	7	8	8	8	6	6	8
PATROLCARS	1	1	1	1	1	1	1	1	1	1
BOATS AND OTHER WATERCRAFT	6	6	7	8	6	7	7	8	8	6
OTHER LAND VEHICLES	3	5	2	4	3	3	3	4	5	5

Table
II F-5

ITEMS WITH EXTREME RANK SUMS BY LEAA REGION
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	1 441, 574	2 500, 641	3 488, 627	4 441, 574	5 525, 670
MOBILE COMMUNICATIONS/COMMAND/CONTROL VEHICLES	313.	369.	338.	377.	398.
SCOOTERS	605.	672.	661.	602.	752.
MOTORCYCLES	****	****	****	****	****
HELICOPTERS	683.	763.	724.	619.	742.
OTHER AIRCRAFT	794.	896.	859.	742.	901.
PATROLCARS	184.	192.	181.	145.	208.
BOATS AND OTHER WATERCRAFT	583.	****	731.	698.	729.
OTHER LAND VEHICLES	365.	458.	414.	427.	449.

ITEMS WITH EXTREME RANK SUMS BY LEAA REGION
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	6 395, 522	7 379, 502	8 382, 507	9 449, 584	10 365, 488
MOBILE COMMUNICATIONS/COMMAND/CONTROL VEHICLES	279.	277.	293.	360.	305.
SCOOTERS	606.	535.	577.	677.	540.
MOTORCYCLES	****	****	****	****	****
HELICOPTERS	550.	584.	570.	****	544.
OTHER AIRCRAFT	664.	631.	616.	710.	611.
PATROLCARS	168.	149.	146.	170.	130.
BOATS AND OTHER WATERCRAFT	605.	592.	590.	722.	****
OTHER LAND VEHICLES	350.	337.	350.	406.	****

Table
II F-6

REGARDING EACH REGION AS A RESPONDENT, IF THE TEN RANKINGS WERE RANDOM,
THE RANK SUM OF AN ITEM WOULD LIE IN THE INTERVAL (25, 65)
95 PERCENT OF THE TIME. THE FOLLOWING ITEMS LIE OUTSIDE THIS INTERVAL:

OTHER AIRCRAFT	75.
PATROLCARS	10.
BOATS AND OTHER WATERCRAFT	67.

REGARDING EACH LEAA REGION AS A RESPONDENT,
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL.

REGARDING EACH DEPARTMENT TYPE AS A RESPONDENT, IF THE SEVEN RANKINGS WERE RANDOM,
THE RANK SUM OF AN ITEM WOULD LIE IN THE INTERVAL (15, 48)
95 PERCENT OF THE TIME. THE FOLLOWING ITEMS LIE OUTSIDE THIS INTERVAL:

OTHER AIRCRAFT	51.
PATROLCARS	7.

REGARDING EACH DEPARTMENT TYPE AS A RESPONDENT,
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0003 PERCENT LEVEL.

Table
II F-7

FREQUENCY DISTRIBUTION OF RANKS OF VEHICLES BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
MOBILE COMMUNICATIONS/COMMAND/CONTROL VEHICLES																
RANK 1	5	10.6	48	21.3	40	16.8	39	14.9	51	20.9	5	11.1	14	17.3	202	17.7
RANK 2	21	44.7	58	25.8	74	31.1	105	40.1	56	23.0	6	13.3	31	38.3	351	30.7
RANK 3	9	19.1	41	18.2	50	21.0	48	18.3	57	23.4	8	17.8	13	16.0	226	19.8
RANK 4	9	19.1	21	9.3	17	7.1	29	11.1	38	15.6	9	20.0	8	9.9	131	11.5
RANK 5	3	6.4	18	8.0	17	7.1	17	6.5	25	10.2	7	15.6	4	4.9	91	8.0
RANK 6	0	.0	12	5.3	14	5.9	9	3.4	7	2.9	4	8.9	2	2.5	48	4.2
RANK 7	0	.0	6	2.7	4	1.7	4	1.5	2	.8	6	13.3	1	1.2	23	2.0
RANK 8	0	.0	3	1.3	7	2.9	3	1.1	5	2.0	0	.0	2	2.5	20	1.8
NOT RANKED	0	.0	18	8.0	15	6.3	8	3.1	3	1.2	0	.0	6	7.4	50	4.4
TIED WITH ONE OTHER ITEM	0	.0	2	.9	2	.8	0	.0	0	.0	0	.0	0	.0	4	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	1	.4	3	1.3	2	.8	1	.4	0	.0	1	1.2	8	.7
SCOOTERS																
RANK 1	0	.0	1	.4	1	.4	1	.4	2	.8	2	4.4	0	.0	7	.6
RANK 2	0	.0	3	1.3	3	1.3	16	6.1	15	6.1	3	6.7	2	2.5	42	3.7
RANK 3	0	.0	4	1.8	16	6.7	27	10.3	30	12.3	5	11.1	5	6.2	87	7.6
RANK 4	0	.0	11	4.9	31	13.0	41	15.6	40	16.4	6	13.3	17	21.0	146	12.8
RANK 5	2	4.3	23	10.2	67	28.2	84	32.1	70	28.7	7	15.6	15	18.5	268	23.5
RANK 6	2	4.3	28	12.4	40	16.8	40	15.3	35	14.3	9	20.0	16	19.8	170	14.9
RANK 7	9	19.1	36	16.0	18	7.6	17	6.5	18	7.4	3	6.7	6	7.4	107	9.4
RANK 8	29	61.7	95	42.2	36	15.1	26	9.9	26	10.7	9	20.0	9	11.1	230	20.1
NOT RANKED	5	10.6	24	10.7	26	10.9	10	3.8	8	3.3	1	2.2	11	13.6	85	7.4
TIED WITH ONE OTHER ITEM	0	.0	1	.4	0	.0	2	.8	0	.0	0	.0	0	.0	3	.3
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	4	1.7	2	.8	0	.0	0	.0	1	1.2	10	.9
MOTORCYCLES																
RANK 1	1	2.1	2	.9	0	.0	3	1.1	0	.0	1	2.2	0	.0	7	.6
RANK 2	4	8.5	9	4.0	35	14.7	34	13.0	61	25.0	16	35.6	8	9.9	167	14.6
RANK 3	2	4.3	8	3.6	24	10.1	41	15.6	50	20.5	11	24.4	13	16.0	149	13.0
RANK 4	4	8.5	34	15.1	60	25.2	76	29.0	53	21.7	6	13.3	16	19.8	249	21.8
RANK 5	6	12.8	35	15.6	40	16.8	65	24.8	37	15.2	3	6.7	23	28.4	209	18.3
RANK 6	12	25.5	45	20.0	29	12.2	16	6.1	20	8.2	4	8.9	7	8.6	133	11.6
RANK 7	14	29.8	58	25.8	20	8.4	15	5.7	13	5.3	4	8.9	4	4.9	128	11.2
RANK 8	1	2.1	11	4.9	5	2.1	3	1.1	3	1.2	0	.0	1	1.2	24	2.1
NOT RANKED	3	6.4	23	10.2	25	10.5	9	3.4	7	2.9	0	.0	9	11.1	76	6.7
TIED WITH ONE OTHER ITEM	0	.0	0	.0	0	.0	1	.4	3	1.2	0	.0	0	.0	4	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	5	2.1	1	.4	0	.0	0	.0	1	1.2	10	.9
HELICOPTERS																
RANK 1	0	.0	10	4.4	1	.4	3	1.1	3	1.2	4	8.9	0	.0	21	1.8
RANK 2	12	25.5	13	5.8	2	.8	2	.8	12	4.9	4	8.9	3	3.7	48	4.2
RANK 3	6	12.8	25	11.1	8	3.4	11	4.2	11	4.5	7	15.6	1	1.2	69	6.0
RANK 4	10	21.3	28	12.4	14	5.9	18	6.9	16	6.6	10	22.2	4	4.9	100	8.8
RANK 5	9	19.1	34	15.1	32	13.4	20	7.6	33	13.5	6	13.3	12	14.8	146	12.8
RANK 6	7	14.9	30	13.3	48	20.2	67	25.6	71	29.1	10	22.2	16	19.8	249	21.8
RANK 7	0	.0	34	15.1	83	34.9	96	36.6	75	30.7	2	4.4	32	39.5	322	28.2
RANK 8	0	.0	28	12.4	25	10.5	30	11.5	15	6.1	1	2.2	4	4.9	103	9.0
NOT RANKED	3	6.4	23	10.2	25	10.5	15	5.7	8	3.3	1	2.2	9	11.1	84	7.4
TIED WITH ONE OTHER ITEM	0	.0	0	.0	0	.0	0	.0	3	1.2	0	.0	0	.0	3	.3
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	5	2.1	1	.4	0	.0	0	.0	1	1.2	10	.9

FREQUENCY DISTRIBUTION OF RANKS OF VEHICLES BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
OTHER AIRCRAFT																
RANK 1	1	2.1	2	.9	0	.0	0	.0	1	.4	0	.0	0	.0	4	.4
RANK 2	2	4.3	8	3.6	0	.0	2	.8	2	.8	0	.0	0	.0	14	1.2
RANK 3	15	31.9	7	3.1	2	.8	1	.4	1	.4	1	2.2	1	1.2	28	2.5
RANK 4	9	19.1	13	5.8	12	5.0	4	1.5	8	3.3	1	2.2	0	.0	47	4.1
RANK 5	8	17.0	42	18.7	17	7.1	7	2.7	7	2.9	4	8.9	2	2.5	87	7.5
RANK 6	3	6.4	48	21.3	38	16.0	36	13.7	31	12.7	7	15.6	9	11.1	172	15.1
RANK 7	6	12.8	43	19.1	55	23.1	85	32.4	90	36.9	17	37.8	18	22.2	314	27.5
RANK 8	0	.0	39	17.3	89	37.4	111	42.4	96	39.3	14	31.1	40	49.4	389	34.1
NOT RANKED	3	6.4	23	10.2	25	10.5	16	6.1	8	3.3	1	2.2	11	13.6	87	7.6
TIED WITH ONE OTHER ITEM	0	.0	1	.4	0	.0	0	.0	0	.0	0	.0	0	.0	1	.1
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	5	2.1	1	.4	0	.0	0	.0	1	1.2	10	.9
PATROLCARS																
RANK 1	40	85.1	137	60.9	186	78.2	206	78.6	174	71.3	31	68.9	65	80.2	839	73.5
RANK 2	2	4.3	43	19.1	33	13.9	31	11.8	35	14.3	7	15.6	6	7.4	157	13.7
RANK 3	1	2.1	15	6.7	11	4.6	11	4.2	16	6.6	3	6.7	4	4.9	61	5.3
RANK 4	2	4.3	6	2.7	2	.8	6	2.3	5	2.0	1	2.2	1	1.2	23	2.0
RANK 5	1	2.1	6	2.7	1	.4	1	.4	3	1.2	1	2.2	0	.0	13	1.1
RANK 6	0	.0	2	.9	1	.4	1	.4	3	1.2	0	.0	1	1.2	8	.7
RANK 7	0	.0	3	1.3	0	.0	1	.4	2	.8	0	.0	0	.0	6	.5
RANK 8	0	.0	3	1.3	0	.0	1	.4	3	1.2	2	4.4	0	.0	9	.8
NOT RANKED	1	2.1	10	4.4	4	1.7	4	1.5	3	1.2	0	.0	4	4.9	26	2.3
TIED WITH ONE OTHER ITEM	0	.0	5	2.2	3	1.3	0	.0	0	.0	0	.0	0	.0	8	.7
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	1	.4	0	.0	2	.8	1	.4	0	.0	1	1.2	5	.4
BOATS AND OTHER WATERCRAFT																
RANK 1	0	.0	9	4.0	1	.4	1	.4	1	.4	0	.0	0	.0	12	1.1
RANK 2	2	4.3	26	11.6	10	4.2	6	2.3	6	2.5	0	.0	2	2.5	52	4.6
RANK 3	4	8.5	32	14.2	29	12.2	12	4.6	8	3.3	1	2.2	5	6.2	91	8.0
RANK 4	1	2.1	55	24.4	45	18.9	33	12.6	21	8.6	2	4.4	18	22.2	175	15.3
RANK 5	5	10.6	23	10.2	18	7.6	32	12.2	19	7.8	7	15.6	10	12.3	114	10.0
RANK 6	11	23.4	23	10.2	29	12.2	69	26.3	62	25.4	8	17.8	14	17.3	216	18.9
RANK 7	10	21.3	14	6.2	20	8.4	22	8.4	34	13.9	10	22.2	8	9.9	118	10.3
RANK 8	10	21.3	23	10.2	62	26.1	73	27.9	84	34.4	16	35.6	15	18.5	283	24.8
NOT RANKED	4	8.5	20	8.9	24	10.1	14	5.3	9	3.7	1	2.2	9	11.1	81	7.1
TIED WITH ONE OTHER ITEM	0	.0	0	.0	0	.0	1	.4	1	.4	0	.0	0	.0	2	.2
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	3	1.3	1	.4	0	.0	0	.0	1	1.2	7	.6
OTHER LAND VEHICLES																
RANK 1	0	.0	13	5.8	7	2.9	12	4.6	10	4.1	2	4.4	1	1.2	45	3.9
RANK 2	4	8.5	48	21.3	65	27.3	59	22.5	55	22.5	9	20.0	22	27.2	262	22.9
RANK 3	7	14.9	69	30.7	74	31.1	102	38.9	64	26.2	9	20.0	30	37.0	355	31.1
RANK 4	9	19.1	31	13.8	31	13.0	42	16.0	55	22.5	10	22.2	7	8.6	185	16.2
RANK 5	10	21.3	18	8.0	17	7.1	22	8.4	44	18.0	10	22.2	4	4.9	125	10.9
RANK 6	7	14.9	11	4.9	10	4.2	8	3.1	7	2.9	2	4.4	4	4.9	49	4.3
RANK 7	3	6.4	5	2.2	9	3.8	5	1.9	1	.4	2	4.4	0	.0	25	2.2
RANK 8	2	4.3	10	4.4	6	2.5	2	.8	4	1.6	1	2.2	3	3.7	28	2.5
NOT RANKED	5	10.6	20	8.9	19	8.0	10	3.8	4	1.6	0	.0	10	12.3	68	6.0
TIED WITH ONE OTHER ITEM	0	.0	1	.4	1	.4	0	.0	1	.4	0	.0	0	.0	3	.3
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	2	.8	2	.8	1	.4	0	.0	1	1.2	9	.8

Table
II G-1

NATIONAL BANKS

FRANGIBLE BULLETS	5
.45 AUTOMATIC	12
ARMOR-PIERCING BULLETS	11
REGULAR SERVICE AMMUNITION FOR HANDGUNS	2
HIGH-DRAG BULLETS	8
9 MM PISTOL	9
SHOTGUN	3
.38 SPECIAL REVOLVER	1
CARBINE	10
REGULAR SERVICE AMMUNITION FOR SHOULDER WEAPONS	7
.357 MAGNUM REVOLVER	4
RIFLE	6

Table
II G-2

ITEMS WITH EXTREME RANK SUMS BY DEPARTMENT TYPE
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	STATE	COUNTY	CITY(1-9 OFFICERS)	CITY(10-49 OFFICERS)	CITY(50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
	237, 372	1265,1554	1370,1671	1524,1841	1407,1712	226, 357	432, 607
FRANGIBLE BULLETS	****	****	****	****	****	****	****
.45 AUTOMATIC	483.	****	****	****	****	421.	674.
ARMOR-PIERCING BULLETS	****	****	****	****	****	394.	664.
REGULAR SERVICE AMMUNITION FOR HANDGUNS	188.	****	****	****	963.	160.	403.
HIGH-DRAG BULLETS	402.	****	****	****	****	****	727.
9 MM PISTOL	381.	****	****	****	****	413.	672.
SHOTGUN	177.	886.	922.	****	995.	207.	330.
.38 SPECIAL REVOLVER	235.	809.	898.	820.	769.	169.	282.
CARBINE	****	****	****	****	****	****	****
REGULAR SERVICE AMMUNITION FOR SHOULDER WEAPONS	****	****	****	****	****	****	****
.357 MAGNUM REVOLVER	177.	973.	****	****	****	****	340.
RIFLE	****	****	****	****	****	****	****

Table
II G-3

THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 47 STATE DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 217 COUNTY DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 234 CITY(1-9 OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 259 CITY(10-49 OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 240 CITY(50 OR MORE OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 45 FIFTY LARGEST CITIES DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 80 TOWNSHIP DEPARTMENTS.

RANKS BY DEPARTMENT TYPE

	STATE	COUNTY	CITY(1-9 OFFICERS)	CITY(10-49 OFFICERS)	CITY(50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
FRANGIBLE BULLETS	5	3	5	5	4	5	6
.45 AUTOMATIC	12	12	10	11	12	11	7
ARMOR-PIERCING BULLETS	10	11	12	12	10	12	9
REGULAR SERVICE AMMUNITION FOR HANDGUNS	2	2	2	3	2	2	4
HIGH-DRAG BULLETS	9	7	8	7	7	6	5
9 MM PISTOL	8	8	7	9	8	10	12
SHOTGUN	4	4	3	4	3	3	3
.38 SPECIAL REVOLVER	3	1	1	1	1	1	1
CARBINE	11	10	9	8	11	8	11
REGULAR SERVICE AMMUNITION FOR SHOULDER WEAPONS	7	9	11	10	9	4	10
.357 MAGNUM REVOLVER	1	5	4	2	5	9	2
RIFLE	6	6	6	6	6	7	8

COMPOSITE RANKS FOR ALL CITIES

FRANGIBLE BULLETS	4
.45 AUTOMATIC	11
ARMOR-PIERCING BULLETS	12
REGULAR SERVICE AMMUNITION FOR HANDGUNS	2
HIGH-DRAG BULLETS	8
9 MM PISTOL	9
SHOTGUN	3
.38 SPECIAL REVOLVER	1
CARBINE	10
REGULAR SERVICE AMMUNITION FOR SHOULDER WEAPONS	6
.357 MAGNUM REVOLVER	5
RIFLE	7

Table
II G-4

THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 114 DEPARTMENTS IN LEAA REGION 1
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 127 DEPARTMENTS IN LEAA REGION 2
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 126 DEPARTMENTS IN LEAA REGION 3
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 113 DEPARTMENTS IN LEAA REGION 4
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 132 DEPARTMENTS IN LEAA REGION 5
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 102 DEPARTMENTS IN LEAA REGION 6
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 90 DEPARTMENTS IN LEAA REGION 7
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 100 DEPARTMENTS IN LEAA REGION 8
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 115 DEPARTMENTS IN LEAA REGION 9
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 94 DEPARTMENTS IN LEAA REGION 10

RANKS BY LEAA REGION

	1	2	3	4	5	6	7	8	9	10
FRANGIBLE BULLETS	8	6	5	6	2	4	5	5	6	5
.45 AUTOMATIC	7	12	12	12	12	11	11	12	10	6
ARMOR-PIERCING BULLETS	11	10	11	11	11	10	12	11	11	12
REGULAR SERVICE AMMUNITION FOR HANDGUNS	3	1	2	3	4	3	2	4	2	2
HIGH-DRAG BULLETS	12	8	10	9	6	7	8	9	8	9
9 MM PISTOL	10	11	6	10	7	12	9	7	9	8
SHOTGUN	2	3	3	4	3	5	3	3	3	3
.38 SPECIAL REVOLVER	1	2	1	1	1	1	1	1	1	4
CARBINE	5	9	7	7	9	8	10	8	12	10
REGULAR SERVICE AMMUNITION FOR SHOULDER WEAPONS	9	4	9	8	10	9	7	10	7	11
.357 MAGNUM REVOLVER	4	5	8	2	5	2	4	2	4	1
RIFLE	6	7	4	5	8	6	6	6	5	7

Table
II G-5

ITEMS WITH EXTREME RANK SUMS BY LEAA REGION
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	1 636, 845	2 714, 935	3 708, 929	4 629, 838	5 745, 970
FRANGIBLE BULLETS	****	****	****	****	****
.45 AUTOMATIC	****	****	****	****	****
ARMOR-PIERCING BULLETS	926.	****	****	926.	****
REGULAR SERVICE AMMUNITION FOR HANDGUNS	490.	543.	596.	544.	626.
HIGH-DRAG BULLETS	****	****	****	997.	****
9 MM PISTOL	958.	****	****	989.	****
SHOTGUN	497.	521.	505.	436.	568.
.38 SPECIAL REVOLVER	341.	429.	362.	380.	463.
CARBINE	****	****	****	****	****
REGULAR SERVICE AMMUNITION FOR SHOULDER WEAPONS	****	****	****	****	****
.357 MAGNUM REVOLVER	****	642.	****	578.	695.
RIFLE	****	****	676.	619.	****

ITEMS WITH EXTREME RANK SUMS BY LEAA REGION
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	6 563, 762	7 545, 740	8 551, 748	9 641, 852	10 515, 706
FRANGIBLE BULLETS	****	753.	****	****	****
.45 AUTOMATIC	924.	872.	924.	****	883.
ARMOR-PIERCING BULLETS	876.	860.	817.	967.	799.
REGULAR SERVICE AMMUNITION FOR HANDGUNS	492.	496.	497.	474.	441.
HIGH-DRAG BULLETS	841.	892.	828.	935.	783.
9 MM PISTOL	934.	845.	789.	903.	762.
SHOTGUN	428.	380.	425.	462.	376.
.38 SPECIAL REVOLVER	387.	341.	387.	491.	399.
CARBINE	****	****	****	857.	****
REGULAR SERVICE AMMUNITION FOR SHOULDER WEAPONS	****	****	758.	****	****
.357 MAGNUM REVOLVER	434.	453.	430.	585.	359.
RIFLE	493.	501.	****	****	****

Table
11 G-6

REGARDING EACH REGION AS A RESPONDENT, IF THE TEN RANKINGS WERE RANDOM,
THE RANK SUM OF AN ITEM WOULD LIE IN THE INTERVAL (34, 96)
95 PERCENT OF THE TIME. THE FOLLOWING ITEMS LIE OUTSIDE THIS INTERVAL:

.45 AUTOMATIC	112.
ARMOR-PIERCING BULLETS	100.
REGULAR SERVICE AMMUNITION FOR HANDGUNS	23.
HIGH-DRAG BULLETS	99.
9 MM PISTOL	101.
SHOTGUN	23.
.38 SPECIAL REVOLVER	17.

REGARDING EACH DEPARTMENT TYPE AS A RESPONDENT, IF THE SEVEN RANKINGS WERE RANDOM,
THE RANK SUM OF AN ITEM WOULD LIE IN THE INTERVAL (20, 71)
95 PERCENT OF THE TIME. THE FOLLOWING ITEMS LIE OUTSIDE THIS INTERVAL:

.45 AUTOMATIC	79.
ARMOR-PIERCING BULLETS	72.
REGULAR SERVICE AMMUNITION FOR HANDGUNS	18.
9 MM PISTOL	72.
SHOTGUN	15.
.38 SPECIAL REVOLVER	10.

REGARDING EACH DEPARTMENT TYPE AS A RESPONDENT,
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL.

FREQUENCY DISTRIBUTION OF RANKS OF
WEAPONS, LETHAL AND RELATED AMMUNITION BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
FRANGIBLE BULLETS																
RANK 1	1	2.1	14	6.2	19	8.0	26	9.9	30	12.3	7	15.6	3	3.7	100	8.8
RANK 2	2	4.3	13	5.8	13	5.5	15	5.7	19	7.8	3	6.7	7	8.6	72	6.3
RANK 3	7	14.9	11	4.9	13	5.5	20	7.6	17	7.0	4	8.9	6	7.4	78	6.8
RANK 4	2	4.3	7	3.1	17	7.1	22	8.4	20	8.2	3	6.7	2	2.5	73	6.4
RANK 5	4	8.5	16	7.1	31	13.0	22	8.4	19	7.8	5	11.1	6	7.4	103	9.0
RANK 6	4	8.5	20	8.9	19	8.0	20	7.6	18	7.4	7	15.6	6	7.4	94	8.2
RANK 7	1	2.1	18	8.0	18	7.6	17	6.5	19	7.8	1	2.2	5	6.2	79	6.9
RANK 8	7	14.9	17	7.6	13	5.5	23	8.8	20	8.2	3	6.7	13	16.0	96	8.4
RANK 9	1	2.1	8	3.6	19	8.0	20	7.6	12	4.9	3	6.7	4	4.9	67	5.9
RANK 10	5	10.6	15	6.7	16	6.7	24	9.2	10	4.1	2	4.4	12	14.8	84	7.4
RANK 11	5	10.6	24	10.7	16	6.7	15	5.7	22	9.0	3	6.7	7	8.6	92	8.1
RANK 12	5	10.6	42	18.7	29	12.2	27	10.3	29	11.9	2	4.4	4	4.9	138	12.1
NOT RANKED	3	6.4	20	8.9	15	6.3	11	4.2	9	3.7	2	4.4	6	7.4	66	5.8
TIED WITH ONE OTHER ITEM	1	2.1	1	.4	3	1.3	1	.4	2	.8	1	2.2	1	1.2	10	.9
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	4	1.7	2	.8	0	.0	0	.0	1	1.2	9	.8
.45 AUTOMATIC																
RANK 1	0	.0	2	.9	4	1.7	4	1.5	2	.8	1	2.2	4	4.9	17	1.5
RANK 2	0	.0	2	.9	6	2.5	2	.8	2	.8	0	.0	1	1.2	13	1.1
RANK 3	0	.0	13	5.8	6	2.5	8	3.1	3	1.2	2	4.4	4	4.9	36	3.2
RANK 4	1	2.1	7	3.1	10	4.2	8	3.1	7	2.9	2	4.4	5	6.2	40	3.5
RANK 5	2	4.3	10	4.4	8	3.4	9	3.4	8	3.3	1	2.2	0	.0	38	3.3
RANK 6	0	.0	13	5.8	14	5.9	20	7.6	9	3.7	1	2.2	3	3.7	60	5.3
RANK 7	2	4.3	12	5.3	21	8.8	18	6.9	14	5.7	2	4.4	5	6.2	74	6.5
RANK 8	1	2.1	16	7.1	23	9.7	21	8.0	23	9.4	3	6.7	7	8.6	94	8.2
RANK 9	2	4.3	25	11.1	22	9.2	27	10.3	29	11.9	3	6.7	15	18.5	123	10.8
RANK 10	9	19.1	35	15.6	26	10.9	39	14.9	36	14.8	4	8.9	9	11.1	158	13.8
RANK 11	11	23.4	37	16.4	34	14.3	48	18.3	49	20.1	11	24.4	11	13.6	201	17.6
RANK 12	16	34.0	32	14.2	47	19.7	48	18.3	52	21.3	14	31.1	12	14.8	221	19.4
NOT RANKED	3	6.4	21	9.3	17	7.1	10	3.8	10	4.1	1	2.2	5	6.2	67	5.9
TIED WITH ONE OTHER ITEM	0	.0	3	1.3	2	.8	4	1.5	2	.8	0	.0	0	.0	11	1.0
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	3	1.3	2	.8	0	.0	0	.0	1	1.2	8	.7
ARMOR-PIERCING BULLETS																
RANK 1	0	.0	2	.9	2	.8	1	.4	0	.0	0	.0	1	1.2	5	.5
RANK 2	2	4.3	2	.9	7	2.9	4	1.5	10	4.1	0	.0	4	4.9	29	2.5
RANK 3	0	.0	2	.9	6	2.5	8	3.1	6	2.5	1	2.2	3	3.7	26	2.3
RANK 4	6	12.8	5	2.2	13	5.5	11	4.2	12	4.9	2	4.4	4	4.9	53	4.6
RANK 5	3	6.4	12	5.3	17	7.1	13	5.0	17	7.0	1	2.2	4	4.9	67	5.9
RANK 6	3	6.4	17	7.6	20	8.4	19	7.3	16	6.6	5	11.1	5	6.2	85	7.4
RANK 7	2	4.3	26	11.6	19	8.0	25	9.5	27	11.1	7	15.6	4	4.9	110	9.6
RANK 8	6	12.8	20	8.9	24	10.1	34	13.0	39	16.0	3	6.7	8	9.9	134	11.7
RANK 9	10	21.3	29	12.9	19	8.0	27	10.3	25	10.2	6	13.3	8	9.9	124	10.9
RANK 10	6	12.8	51	22.7	28	11.8	38	14.5	25	10.2	5	11.1	16	19.8	169	14.8
RANK 11	3	6.4	23	10.2	34	14.3	30	11.5	24	9.8	4	8.9	10	12.3	128	11.2
RANK 12	4	8.5	16	7.1	32	13.4	44	16.8	31	12.7	9	20.0	5	6.2	141	12.3
NOT RANKED	2	4.3	20	8.9	17	7.1	8	3.1	12	4.9	2	4.4	9	11.1	70	6.1
TIED WITH ONE OTHER ITEM	0	.0	1	.4	2	.8	2	.8	2	.8	1	2.2	0	.0	8	.7
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	4	1.7	1	.4	0	.0	0	.0	1	1.2	9	.8

Table
II G-7 cont.

FREQUENCY DISTRIBUTION OF RANKS OF
WEAPONS,LETHAL AND RELATED AMMUNITION BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
REGULAR SERVICE AMMUNITION FOR SHOULDER WEAPONS																
RANK 1	0	.0	2	.9	2	.8	0	.0	0	.0	1	2.2	1	1.2	6	.5
RANK 2	2	4.3	10	4.4	8	3.4	1	.4	7	2.9	4	8.9	2	2.5	34	3.0
RANK 3	3	6.4	9	4.0	3	1.3	18	6.9	13	5.3	3	6.7	2	2.5	51	4.5
RANK 4	2	4.3	17	7.6	25	10.5	24	9.2	27	11.1	5	11.1	8	9.9	108	9.5
RANK 5	6	12.8	25	11.1	20	8.4	32	12.2	40	16.4	11	24.4	9	11.1	143	12.5
RANK 6	4	8.5	29	12.9	33	13.9	30	11.5	31	12.7	5	11.1	12	14.8	144	12.6
RANK 7	10	21.3	34	15.1	25	10.5	29	11.1	27	11.1	5	11.1	6	7.4	136	11.9
RANK 8	7	14.9	26	11.6	30	12.6	35	13.4	21	8.6	3	6.7	11	13.6	133	11.6
RANK 9	5	10.6	17	7.6	21	8.8	28	10.7	30	12.3	5	11.1	9	11.1	115	10.1
RANK 10	3	6.4	14	6.2	22	9.2	22	8.4	17	7.0	2	4.4	4	4.9	84	7.4
RANK 11	1	2.1	12	5.3	18	7.6	22	8.4	12	4.9	0	.0	10	12.3	75	6.6
RANK 12	2	4.3	10	4.4	15	6.3	13	5.0	8	3.3	0	.0	3	3.7	51	4.5
NOT RANKED	2	4.3	20	8.9	16	6.7	8	3.1	11	4.5	1	2.2	4	4.9	62	5.4
TIED WITH ONE OTHER ITEM	0	.0	2	.9	2	.8	2	.8	3	1.2	1	2.2	0	.0	10	.9
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	5	2.1	1	.4	0	.0	0	.0	1	1.2	9	.8
.357 MAGNUM REVOLVER																
RANK 1	20	42.6	61	27.1	63	26.5	65	24.8	30	12.3	2	4.4	25	30.9	266	23.3
RANK 2	6	12.8	25	11.1	34	14.3	34	13.0	27	11.1	2	4.4	10	12.3	138	12.1
RANK 3	2	4.3	19	8.4	18	7.6	24	9.2	19	7.8	2	4.4	6	7.4	90	7.9
RANK 4	1	2.1	18	8.0	18	7.6	16	6.1	16	6.6	2	4.4	5	6.2	76	6.7
RANK 5	4	8.5	18	8.0	14	5.9	15	5.7	11	4.5	2	4.4	6	7.4	70	6.1
RANK 6	2	4.3	12	5.3	14	5.9	22	8.4	14	5.7	4	8.9	6	7.4	74	6.5
RANK 7	2	4.3	14	6.2	16	6.7	22	8.4	21	8.6	5	11.1	6	7.4	86	7.5
RANK 8	4	8.5	13	5.8	13	5.5	14	5.3	25	10.2	2	4.4	3	3.7	74	6.5
RANK 9	2	4.3	8	3.6	14	5.9	18	6.9	15	6.1	5	11.1	4	4.9	66	5.8
RANK 10	2	4.3	8	3.6	6	2.5	13	5.0	20	8.2	11	24.4	5	6.2	65	5.7
RANK 11	1	2.1	7	3.1	7	2.9	6	2.3	23	9.4	4	8.9	1	1.2	49	4.3
RANK 12	0	.0	5	2.2	8	3.4	6	2.3	15	6.1	3	6.7	0	.0	37	3.2
NOT RANKED	1	2.1	17	7.6	13	5.5	7	2.7	8	3.3	1	2.2	4	4.9	51	4.5
TIED WITH ONE OTHER ITEM	0	.0	0	.0	2	.8	2	.8	1	.4	0	.0	1	1.2	6	.5
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	5	2.1	1	.4	1	.4	0	.0	1	1.2	11	1.0
RIFLE																
RANK 1	0	.0	12	5.3	5	2.1	6	2.3	5	2.0	1	2.2	3	3.7	32	2.8
RANK 2	6	12.8	22	9.8	11	4.6	14	5.3	7	2.9	0	.0	4	4.9	64	5.6
RANK 3	3	6.4	28	12.4	38	16.0	31	11.8	25	10.2	4	8.9	5	6.2	134	11.7
RANK 4	11	23.4	38	16.9	44	18.5	41	15.6	49	20.1	9	20.0	15	18.5	207	18.1
RANK 5	5	10.6	37	16.4	33	13.9	45	17.2	40	16.4	5	11.1	15	18.5	180	15.8
RANK 6	8	17.0	26	11.6	21	8.8	31	11.8	28	11.5	4	8.9	10	12.3	128	11.2
RANK 7	9	19.1	15	6.7	18	7.6	29	11.1	27	11.1	6	13.3	9	11.1	113	9.9
RANK 8	2	4.3	9	4.0	14	5.9	14	5.3	20	8.2	5	11.1	3	3.7	67	5.9
RANK 9	0	.0	6	2.7	17	7.1	17	6.5	15	6.1	6	13.3	4	4.9	65	5.7
RANK 10	1	2.1	1	.4	12	5.0	12	4.6	13	5.3	2	4.4	3	3.7	44	3.9
RANK 11	1	2.1	3	1.3	7	2.9	9	3.4	6	2.5	2	4.4	2	2.5	30	2.6
RANK 12	0	.0	10	4.4	3	1.3	8	3.1	3	1.2	0	.0	3	3.7	27	2.4
NOT RANKED	1	2.1	18	8.0	15	6.3	5	1.9	6	2.5	1	2.2	5	6.2	51	4.5
TIED WITH ONE OTHER ITEM	1	2.1	1	.4	0	.0	0	.0	2	.8	0	.0	0	.0	4	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	5	2.1	1	.4	0	.0	0	.0	1	1.2	10	.9

FREQUENCY DISTRIBUTION OF RANKS OF
WEAPONS, LETHAL AND RELATED AMMUNITION BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
SHOTGUN																
RANK 1	3	6.4	17	7.6	21	8.8	15	5.7	11	4.5	2	4.4	4	4.9	73	6.4
RANK 2	9	19.1	46	20.4	60	25.2	64	24.4	50	20.5	7	15.6	17	21.0	253	22.2
RANK 3	15	31.9	50	22.2	57	23.9	53	20.2	63	25.8	9	20.0	23	28.4	270	23.6
RANK 4	5	10.6	33	14.7	18	7.6	33	12.6	33	13.5	9	20.0	6	7.4	137	12.0
RANK 5	7	14.9	20	8.9	26	10.9	30	11.5	26	10.7	4	8.9	12	14.8	125	10.9
RANK 6	2	4.3	9	4.0	16	6.7	19	7.3	19	7.8	3	6.7	8	9.9	76	6.7
RANK 7	4	8.5	11	4.9	11	4.6	15	5.7	12	4.9	4	8.9	2	2.5	59	5.2
RANK 8	1	2.1	18	8.0	6	2.5	11	4.2	9	3.7	3	6.7	1	1.2	49	4.3
RANK 9	1	2.1	4	1.8	6	2.5	5	1.9	9	3.7	1	2.2	1	1.2	27	2.4
RANK 10	0	.0	3	1.3	3	1.3	6	2.3	3	1.2	1	2.2	4	4.9	20	1.8
RANK 11	0	.0	2	.9	2	.8	4	1.5	2	.8	1	2.2	0	.0	11	1.0
RANK 12	0	.0	0	.0	1	.4	1	.4	1	.4	0	.0	0	.0	3	.3
NOT RANKED	0	.0	12	5.3	11	4.6	6	2.3	6	2.5	1	2.2	3	3.7	39	3.4
TIED WITH ONE OTHER ITEM	0	.0	1	.4	1	.4	1	.4	1	.4	0	.0	0	.0	4	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	4	1.7	2	.8	1	.4	0	.0	1	1.2	10	.9
.38 SPECIAL REVOLVER																
RANK 1	10	21.3	80	35.6	91	38.2	111	42.4	111	45.5	16	35.6	32	39.5	451	39.5
RANK 2	9	19.1	37	16.4	38	16.0	53	20.2	42	17.2	7	15.6	16	19.8	202	17.7
RANK 3	2	4.3	19	8.4	20	8.4	20	7.6	14	5.7	5	11.1	7	8.6	87	7.6
RANK 4	5	10.6	15	6.7	9	3.8	13	5.0	13	5.3	2	4.4	4	4.9	61	5.3
RANK 5	4	8.5	9	4.0	8	3.4	9	3.4	10	4.1	3	6.7	3	3.7	46	4.0
RANK 6	0	.0	8	3.6	4	1.7	11	4.2	14	5.7	3	6.7	2	2.5	42	3.7
RANK 7	2	4.3	13	5.8	15	6.3	10	3.8	6	2.5	1	2.2	5	6.2	52	4.6
RANK 8	3	6.4	7	3.1	13	5.5	12	4.6	5	2.0	3	6.7	1	1.2	44	3.9
RANK 9	1	2.1	9	4.0	11	4.6	5	1.9	5	2.0	1	2.2	2	2.5	34	3.0
RANK 10	4	8.5	6	2.7	8	3.4	4	1.5	4	1.6	0	.0	4	4.9	30	2.6
RANK 11	3	6.4	3	1.3	8	3.4	6	2.3	8	3.3	1	2.2	0	.0	29	2.5
RANK 12	2	4.3	5	2.2	4	1.7	4	1.5	6	2.5	2	4.4	4	4.9	27	2.4
NOT RANKED	2	4.3	14	6.2	9	3.8	4	1.5	6	2.5	1	2.2	1	1.2	37	3.2
TIED WITH ONE OTHER ITEM	0	.0	2	.9	3	1.3	1	.4	1	.4	0	.0	0	.0	7	.6
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	4	1.7	2	.8	0	.0	0	.0	1	1.2	9	.8
CARBINE																
RANK 1	0	.0	2	.9	2	.8	3	1.1	1	.4	0	.0	1	1.2	9	.8
RANK 2	0	.0	13	5.8	11	4.6	10	3.8	4	1.6	1	2.2	2	2.5	41	3.6
RANK 3	3	6.4	23	10.2	18	7.6	13	5.0	13	5.3	5	11.1	9	11.1	84	7.4
RANK 4	4	8.5	23	10.2	22	9.2	29	11.1	18	7.4	4	8.9	11	13.6	111	9.7
RANK 5	4	8.5	30	13.3	26	10.9	30	11.5	20	8.2	4	8.9	6	7.4	120	10.5
RANK 6	14	29.8	33	14.7	28	11.8	34	13.0	35	14.3	5	11.1	10	12.3	159	13.9
RANK 7	4	8.5	26	11.6	26	10.9	33	12.6	33	13.5	4	8.9	16	19.8	142	12.4
RANK 8	1	2.1	21	9.3	20	8.4	37	14.1	30	12.3	5	11.1	10	12.3	124	10.9
RANK 9	6	12.8	16	7.1	32	13.4	25	9.5	30	12.3	7	15.6	2	2.5	118	10.3
RANK 10	4	8.5	4	1.8	16	6.7	19	7.3	28	11.5	3	6.7	2	2.5	76	6.7
RANK 11	4	8.5	11	4.9	11	4.6	16	6.1	15	6.1	4	8.9	5	6.2	66	5.8
RANK 12	2	4.3	3	1.3	10	4.2	3	1.1	6	2.5	2	4.4	2	2.5	28	2.5
NOT RANKED	1	2.1	20	8.9	16	6.7	10	3.8	11	4.5	1	2.2	5	6.2	64	5.6
TIED WITH ONE OTHER ITEM	0	.0	1	.4	0	.0	1	.4	2	.8	1	2.2	0	.0	5	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	5	2.1	1	.4	0	.0	0	.0	1	1.2	9	.8

Table
II G-7 cont.

FREQUENCY DISTRIBUTION OF RANKS OF
WEAPONS, LETHAL AND RELATED AMMUNITION BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
REGULAR SERVICE AMMUNITION FOR HANDGUNS																
RANK 1	11	23.4	32	14.2	32	13.4	33	12.6	44	18.0	12	26.7	11	13.6	175	15.3
RANK 2	7	14.9	33	14.7	28	11.8	36	13.7	50	20.5	10	22.2	14	17.3	178	15.6
RANK 3	7	14.9	24	10.7	32	13.4	37	14.1	36	14.8	4	8.9	8	9.9	148	13.0
RANK 4	6	12.8	26	11.6	25	10.5	30	11.5	24	9.8	4	8.9	8	9.9	123	10.8
RANK 5	3	6.4	17	7.6	19	8.0	27	10.3	19	7.8	3	6.7	6	7.4	94	8.2
RANK 6	3	6.4	19	8.4	26	10.9	25	9.5	21	8.6	5	11.1	7	8.6	106	9.3
RANK 7	1	2.1	14	6.2	17	7.1	20	7.6	15	6.1	3	6.7	7	8.6	77	6.7
RANK 8	5	10.6	14	6.2	9	3.8	13	5.0	9	3.7	2	4.4	5	6.2	57	5.0
RANK 9	1	2.1	13	5.8	12	5.0	15	5.7	8	3.3	0	.0	6	7.4	55	4.8
RANK 10	0	.0	11	4.9	13	5.5	14	5.3	7	2.9	1	2.2	1	1.2	47	4.1
RANK 11	0	.0	4	1.8	9	3.8	4	1.5	3	1.2	0	.0	2	2.5	22	1.9
RANK 12	1	2.1	4	1.8	4	1.7	3	1.1	1	.4	0	.0	3	3.7	16	1.4
NOT RANKED	2	4.3	14	6.2	12	5.0	5	1.9	7	2.9	1	2.2	3	3.7	44	3.9
TIED WITH ONE OTHER ITEM	0	.0	1	.4	1	.4	1	.4	1	.4	0	.0	0	.0	4	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	5	2.1	2	.8	1	.4	0	.0	1	1.2	11	1.0
HIGH-DRAG BULLETS																
RANK 1	0	.0	4	1.8	1	.4	3	1.1	5	2.0	1	2.2	3	3.7	17	1.5
RANK 2	2	4.3	5	2.2	7	2.9	14	5.3	16	6.6	9	20.0	0	.0	53	4.6
RANK 3	2	4.3	3	1.3	7	2.9	10	3.8	14	5.7	3	6.7	2	2.5	41	3.6
RANK 4	0	.0	9	4.0	6	2.5	18	6.9	12	4.9	2	4.4	3	3.7	50	4.4
RANK 5	1	2.1	6	2.7	10	4.2	14	5.3	16	6.6	5	11.1	4	4.9	56	4.9
RANK 6	4	8.5	8	3.6	16	6.7	8	3.1	21	8.6	2	4.4	2	2.5	61	5.3
RANK 7	6	12.8	9	4.0	18	7.6	18	6.9	15	6.1	4	8.9	3	3.7	73	6.4
RANK 8	3	6.4	16	7.1	26	10.9	16	6.1	13	5.3	4	8.9	6	7.4	84	7.4
RANK 9	9	19.1	35	15.6	22	9.2	33	12.6	31	12.7	4	8.9	12	14.8	146	12.8
RANK 10	4	8.5	27	12.0	41	17.2	29	11.1	32	13.1	4	8.9	8	9.9	145	12.7
RANK 11	6	12.8	42	18.7	27	11.3	42	16.0	35	14.3	3	6.7	17	21.0	172	15.1
RANK 12	6	12.8	40	17.8	37	15.5	39	14.9	21	8.6	2	4.4	14	17.3	159	13.9
NOT RANKED	4	8.5	21	9.3	20	8.4	18	6.9	13	5.3	2	4.4	7	8.6	85	7.4
TIED WITH ONE OTHER ITEM	2	4.3	0	.0	1	.4	1	.4	1	.4	0	.0	0	.0	5	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	4	1.7	2	.8	0	.0	0	.0	1	1.2	10	.9
9 MM PISTOL																
RANK 1	2	4.3	4	1.8	7	2.9	4	1.5	3	1.2	1	2.2	3	3.7	24	2.1
RANK 2	1	2.1	7	3.1	11	4.6	10	3.8	7	2.9	1	2.2	2	2.5	39	3.4
RANK 3	3	6.4	10	4.4	6	2.5	14	5.3	15	6.1	2	4.4	2	2.5	52	4.6
RANK 4	4	8.5	11	4.9	15	6.3	11	4.2	6	2.5	0	.0	5	6.2	52	4.6
RANK 5	3	6.4	5	2.2	8	3.4	8	3.1	12	4.9	0	.0	4	4.9	40	3.5
RANK 6	0	.0	15	6.7	7	2.9	17	6.5	8	3.3	1	2.2	4	4.9	52	4.6
RANK 7	2	4.3	10	4.4	14	5.9	17	6.5	19	7.8	1	2.2	7	8.6	70	6.1
RANK 8	3	6.4	23	10.2	26	10.9	23	8.8	23	9.4	7	15.6	8	9.9	113	9.9
RANK 9	6	12.8	30	13.3	23	9.7	32	12.2	24	9.8	3	6.7	7	8.6	125	10.9
RANK 10	6	12.8	26	11.6	26	10.9	28	10.7	39	16.0	9	20.0	8	9.9	142	12.4
RANK 11	9	19.1	33	14.7	43	18.1	44	16.8	30	12.3	11	24.4	10	12.3	180	15.6
RANK 12	5	10.6	27	12.0	32	13.4	41	15.6	42	17.2	6	13.3	16	19.8	169	14.8
NOT RANKED	3	6.4	24	10.7	20	8.4	13	5.0	16	6.6	3	6.7	5	6.2	84	7.4
TIED WITH ONE OTHER ITEM	0	.0	1	.4	5	2.1	2	.8	2	.8	0	.0	2	2.5	12	1.1
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	4	1.7	1	.4	0	.0	0	.0	1	1.2	8	.7

Table

II H-I

NATIONAL RANKS

BLACK JACKS/SAPS	5
BATONS/BILLY CLUBS/NIGHTSTICKS	1
WATER CANNON	8
TRANQUILIZER DART GUNS	7
GAS GRENADES AND CANNISTERS	4
DYE-MARKER GUNS	9
ELECTRIC SHOCKERS	11
PELLET GUNS	10
TEAR GAS	3
TEAR GAS DISPENSERS	2
TEAR GAS GENERATORS	6

Table

II H-2

ITEMS WITH EXTREME RANK SUMS BY DEPARTMENT TYPE
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	STATE	COUNTY	CITY(1-9 OFFICERS)	CITY(10-49 OFFICERS)	CITY(50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
	221, 342	1165,1426	1245,1514	1405,1690	1308,1583	210, 329	395, 552
BLACK JACKS/SAPS	352.	****	****	****	****	392.	380.
BATONS/BILLY CLUBS/NIGHTSTICKS	218.	964.	901.	****	****	****	296.
WATER CANNON	405.	****	****	****	****	337.	717.
TRANQUILIZER DART GUNS	390.	****	****	****	****	****	****
GAS GRENADES AND CANNISTERS	137.	953.	****	996.	924.	166.	367.
DYE-MARKER GUNS	354.	****	****	****	****	****	594.
ELECTRIC SHOCKERS	410.	****	****	****	****	397.	574.
PELLET GUNS	363.	****	****	****	****	369.	605.
TEAR GAS	139.	928.	****	****	894.	150.	335.
TEAR GAS DISPENSERS	118.	755.	733.	764.	713.	122.	308.
TEAR GAS GENERATORS	212.	****	****	****	****	188.	568.

Table
II H-3

THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 47 STATE DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 216 COUNTY DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 230 CITY(1-9 OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 259 CITY(10-49 OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 241 CITY(50 OR MORE OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 45 FIFTY LARGEST CITIES DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 72 TOWNSHIP DEPARTMENTS.

RANKS BY DEPARTMENT TYPE

	STATE	COUNTY	CITY(1-9 OFFICERS)	CITY(10-49 OFFICERS)	CITY(50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
BLACK JACKS/SAPS	8	5	3	5	7	6	5
BATONS/BILLY CLUBS/NIGHTSTICKS	4	3	1	3	4	1	4
WATER CANNON	11	6	8	11	8	9	11
TRANQUILIZER DART GUNS	6	7	7	7	6	8	7
GAS GRENADES AND CANNISTERS	3	1	5	4	3	4	3
DYE-MARKER GUNS	7	10	10	8	9	7	9
ELECTRIC SHOCKERS	10	11	9	10	11	11	8
PELLET GUNS	9	9	11	9	10	10	10
TEAR GAS	2	4	4	2	2	2	1
TEAR GAS DISPENSERS	1	2	2	1	1	3	2
TEAR GAS GENERATORS	5	8	6	6	5	5	6

COMPOSITE RANKS FOR ALL CITIES

BLACK JACKS/SAPS	6
BATONS/BILLY CLUBS/NIGHTSTICKS	1
WATER CANNON	9
TRANQUILIZER DART GUNS	7
GAS GRENADES AND CANNISTERS	4
DYE-MARKER GUNS	8
ELECTRIC SHOCKERS	11
PELLET GUNS	10
TEAR GAS	3
TEAR GAS DISPENSERS	2
TEAR GAS GENERATORS	5

Table
II H-4

THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 113 DEPARTMENTS IN LEAA REGION 1
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 125 DEPARTMENTS IN LEAA REGION 2
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 126 DEPARTMENTS IN LEAA REGION 3
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 113 DEPARTMENTS IN LEAA REGION 4
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 132 DEPARTMENTS IN LEAA REGION 5
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 102 DEPARTMENTS IN LEAA REGION 6
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 98 DEPARTMENTS IN LEAA REGION 7
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 98 DEPARTMENTS IN LEAA REGION 8
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 116 DEPARTMENTS IN LEAA REGION 9
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 93 DEPARTMENTS IN LEAA REGION 10

RANKS BY LEAA REGION

	1	2	3	4	5	6	7	8	9	10
BLACK JACKS/SAPS	6	7	5	5	5	6	6	7	6	8
BATONS/BILLY CLUBS/NIGHTSTICKS	4	1	1	4	2	3	3	4	3	4
WATER CANNON	11	11	10	8	6	8	10	9	9	10
TRANQUILIZER DART GUNS	9	6	7	7	7	9	7	5	7	6
GAS GRENADES AND CANNISTERS	2	3	4	3	4	4	4	1	2	3
DYE-MARKER GUNS	7	9	9	9	9	7	8	8	10	9
ELECTRIC SHOCKERS	10	10	8	11	11	10	11	11	11	7
PELLET GUNS	8	8	11	10	10	11	9	10	8	11
TEAR GAS	3	2	2	2	1	1	1	3	4	1
TEAR GAS DISPENSERS	1	4	3	1	3	2	2	2	1	2
TEAR GAS GENERATORS	5	5	6	6	8	5	5	6	5	5

Table
II H-5

ITEMS WITH EXTREME RANK SUMS BY LEAA REGION
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	1 583, 772	2 650, 849	3 656, 855	4 583, 772	5 690, 893
BLACK JACKS/SAPS	****	****	637.	****	****
BATONS/BILLY CLUBS/NIGHTSTICKS	491.	532.	513.	495.	542.
WATER CANNON	940.	****	****	919.	****
TRANQUILIZER DART GUNS	****	****	****	794.	****
GAS GRENADES AND CANNISTERS	490.	481.	555.	485.	540.
DYE-MARKER GUNS	863.	946.	946.	901.	****
ELECTRIC SHOCKERS	880.	964.	915.	846.	****
PELLET GUNS	869.	971.	994.	918.	****
TEAR GAS	480.	522.	552.	468.	544.
TEAR GAS DISPENSERS	363.	416.	466.	346.	424.
TEAR GAS GENERATORS	****	****	****	****	****

ITEMS WITH EXTREME RANK SUMS BY LEAA REGION
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	6 522, 701	7 500, 675	8 500, 675	9 600, 791	10 472, 643
BLACK JACKS/SAPS	****	****	****	833.	667.
BATONS/BILLY CLUBS/NIGHTSTICKS	488.	447.	435.	561.	452.
WATER CANNON	777.	840.	804.	988.	783.
TRANQUILIZER DART GUNS	****	****	****	****	****
GAS GRENADES AND CANNISTERS	459.	470.	456.	408.	352.
DYE-MARKER GUNS	718.	736.	702.	852.	679.
ELECTRIC SHOCKERS	832.	798.	820.	953.	727.
PELLET GUNS	830.	777.	771.	964.	763.
TEAR GAS	425.	378.	400.	461.	353.
TEAR GAS DISPENSERS	360.	321.	301.	272.	243.
TEAR GAS GENERATORS	****	****	****	****	****

Table
II H-6

REGARDING EACH REGION AS A RESPONDENT, IF THE TEN RANKINGS WERE RANDOM,
THE RANK SUM OF AN ITEM WOULD LIE IN THE INTERVAL (32, 88)
95 PERCENT OF THE TIME. THE FOLLOWING ITEMS LIE OUTSIDE THIS INTERVAL:

WATER CANNON	95.
GAS GRENADES AND CANNISTERS	28.
ELECTRIC SHOCKERS	105.
PELLET GUNS	94.
TEAR GAS	22.
TEAR GAS DISPENSERS	15.

REGARDING EACH LEAA REGION AS A RESPONDENT,
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL.

REGARDING EACH DEPARTMENT TYPE AS A RESPONDENT, IF THE SEVEN RANKINGS WERE RANDOM,
THE RANK SUM OF AN ITEM WOULD LIE IN THE INTERVAL (19, 65)
95 PERCENT OF THE TIME. THE FOLLOWING ITEMS LIE OUTSIDE THIS INTERVAL:

WATER CANNON	71.
ELECTRIC SHOCKERS	70.
TEAR GAS	18.
TEAR GAS DISPENSERS	9.

REGARDING EACH DEPARTMENT TYPE AS A RESPONDENT,
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL.

Table
II H-7

FREQUENCY DISTRIBUTION OF RANKS OF
WEAPONS, NON-LETHAL BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
BLACK JACKS/SAPS																
RANK 1	0	.0	33	14.7	32	13.4	25	9.5	6	2.5	0	.0	14	17.3	110	9.6
RANK 2	1	2.1	31	13.8	43	18.1	34	13.0	24	9.8	3	6.7	12	14.8	148	13.0
RANK 3	2	4.3	19	8.4	28	11.8	16	6.1	7	2.9	0	.0	11	13.6	83	7.3
RANK 4	3	6.4	14	6.2	25	10.5	20	7.6	13	5.3	0	.0	7	8.6	82	7.2
RANK 5	6	12.8	25	11.1	17	7.1	23	8.8	17	7.0	1	2.2	6	7.4	95	8.3
RANK 6	9	19.1	18	8.0	16	6.7	24	9.2	26	10.7	6	13.3	7	8.6	106	9.3
RANK 7	2	4.3	11	4.9	11	4.6	18	6.9	16	6.6	2	4.4	4	4.9	64	5.6
RANK 8	5	10.6	13	5.8	5	2.1	17	6.5	17	7.0	3	6.7	1	1.2	61	5.3
RANK 9	2	4.3	9	4.0	8	3.4	25	9.5	22	9.0	5	11.1	4	4.9	75	6.6
RANK 10	5	10.6	13	5.8	17	7.1	21	8.0	32	13.1	11	24.4	2	2.5	101	8.8
RANK 11	10	21.3	27	12.0	21	8.8	31	11.8	57	23.4	13	28.9	9	11.1	168	14.7
NOT RANKED	2	4.3	12	5.3	15	6.3	8	3.1	7	2.9	1	2.2	4	4.9	49	4.3
TIED WITH ONE OTHER ITEM	0	.0	1	.4	0	.0	0	.0	2	.8	0	.0	0	.0	3	.3
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	4	1.7	2	.8	0	.0	0	.0	1	1.2	10	.9
BATONS/BILLY CLUBS/NIGHTSTICKS																
RANK 1	5	10.6	32	14.2	47	19.7	55	21.0	54	22.1	9	20.0	20	24.7	222	19.4
RANK 2	5	10.6	45	20.0	49	20.6	36	13.7	16	6.6	1	2.2	21	25.9	173	15.1
RANK 3	6	12.8	18	8.0	32	13.4	17	6.5	17	7.0	1	2.2	3	3.7	94	8.2
RANK 4	5	10.6	20	8.9	23	9.7	31	11.8	27	11.1	4	8.9	9	11.1	119	10.4
RANK 5	9	19.1	33	14.7	25	10.5	29	11.1	41	16.8	7	15.6	7	8.6	151	13.2
RANK 6	9	19.1	20	8.9	13	5.5	26	9.9	19	7.8	5	11.1	4	4.9	96	8.4
RANK 7	3	6.4	7	3.1	4	1.7	12	4.6	13	5.3	3	6.7	4	4.9	46	4.0
RANK 8	2	4.3	8	3.6	10	4.2	18	6.9	8	3.3	2	4.4	4	4.9	52	4.6
RANK 9	1	2.1	9	4.0	5	2.1	12	4.6	13	5.3	6	13.3	1	1.2	47	4.1
RANK 10	2	4.3	11	4.9	15	6.3	15	5.7	24	9.8	4	8.9	5	6.2	76	6.7
RANK 11	0	.0	5	2.2	3	1.3	4	1.5	6	2.5	3	6.7	0	.0	21	1.8
NOT RANKED	0	.0	17	7.6	12	5.0	7	2.7	6	2.5	0	.0	3	3.7	45	3.9
TIED WITH ONE OTHER ITEM	1	2.1	1	.4	1	.4	1	.4	1	.4	0	.0	2	2.5	7	.6
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	4	1.7	2	.8	0	.0	0	.0	1	1.2	10	.9
WATER CANNON																
RANK 1	0	.0	6	2.7	5	2.1	2	.8	7	2.9	1	2.2	1	1.2	22	1.9
RANK 2	0	.0	3	1.3	2	.8	5	1.9	6	2.5	1	2.2	1	1.2	18	1.6
RANK 3	0	.0	7	3.1	4	1.7	2	.8	5	2.0	2	4.4	0	.0	20	1.8
RANK 4	1	2.1	8	3.6	3	1.3	5	1.9	6	2.5	0	.0	0	.0	23	2.0
RANK 5	3	6.4	12	5.3	8	3.4	15	5.7	16	6.6	4	8.9	6	7.4	64	5.6
RANK 6	0	.0	12	5.3	19	8.0	13	5.0	22	9.0	3	6.7	0	.0	69	6.0
RANK 7	9	19.1	23	10.2	15	6.3	34	13.0	29	11.9	10	22.2	7	8.6	127	11.1
RANK 8	5	10.6	20	8.9	23	9.7	34	13.0	28	11.5	9	20.0	9	11.1	128	11.2
RANK 9	10	21.3	26	11.6	38	16.0	29	11.1	36	14.8	4	8.9	11	13.6	154	13.5
RANK 10	8	17.0	27	12.0	33	13.9	42	16.0	38	15.6	7	15.6	11	13.6	166	14.5
RANK 11	8	17.0	56	24.9	66	27.7	69	26.3	42	17.2	3	6.7	28	34.6	272	23.8
NOT RANKED	3	6.4	25	11.1	22	9.2	12	4.6	9	3.7	1	2.2	7	8.6	79	6.9
TIED WITH ONE OTHER ITEM	0	.0	1	.4	1	.4	0	.0	1	.4	0	.0	0	.0	3	.3
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	4	1.7	1	.4	0	.0	0	.0	1	1.2	9	.8

Table

II H-7 cont.

FREQUENCY DISTRIBUTION OF RANKS OF WEAPONS, NON-LETHAL BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
TRANQUILIZER DART GUNS																
RANK 1	1	2.1	14	6.2	21	8.8	18	6.9	19	7.8	3	6.7	10	12.3	86	7.5
RANK 2	0	.0	5	2.2	9	3.8	10	3.8	7	2.9	1	2.2	3	3.7	35	3.1
RANK 3	1	2.1	14	6.2	13	5.5	22	8.4	10	4.1	1	2.2	8	9.9	69	6.0
RANK 4	2	4.3	28	12.4	29	12.2	19	7.3	16	6.6	3	6.7	3	3.7	100	8.8
RANK 5	2	4.3	19	8.4	23	9.7	28	10.7	22	9.0	3	6.7	9	11.1	106	9.3
RANK 6	2	4.3	23	10.2	21	8.8	34	13.0	19	7.8	4	8.9	13	16.0	116	10.2
RANK 7	5	10.6	22	9.8	29	12.2	31	11.8	25	10.2	4	8.9	7	8.6	123	10.8
RANK 8	5	10.6	32	14.2	19	8.0	34	13.0	41	16.8	13	28.9	4	4.9	148	13.0
RANK 9	11	23.4	18	8.0	20	8.4	23	8.8	28	11.5	6	13.3	6	7.4	112	9.8
RANK 10	8	17.0	14	6.2	18	7.6	18	6.9	24	9.8	2	4.4	8	9.9	92	8.1
RANK 11	7	14.9	15	6.7	18	7.6	14	5.3	23	9.4	4	8.9	5	6.2	86	7.5
NOT RANKED	3	6.4	21	9.3	18	7.6	11	4.2	10	4.1	1	2.2	5	6.2	69	6.0
TIED WITH ONE OTHER ITEM	0	.0	0	.0	0	.0	1	.4	0	.0	0	.0	0	.0	1	.1
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	4	1.7	1	.4	1	.4	0	.0	1	1.2	10	.9
GAS GRENADES AND CANNISTERS																
RANK 1	11	23.4	34	15.1	21	8.8	37	14.1	31	12.7	8	17.8	8	9.9	150	13.1
RANK 2	11	23.4	22	9.8	31	13.0	37	14.1	35	14.3	5	11.1	15	18.5	156	13.7
RANK 3	9	19.1	30	13.3	20	8.4	55	21.0	52	21.3	6	13.3	10	12.3	182	15.9
RANK 4	10	21.3	38	16.9	29	12.2	46	17.6	51	20.9	13	28.9	11	13.6	198	17.3
RANK 5	3	6.4	22	9.8	30	12.6	29	11.1	23	9.4	8	17.8	8	9.9	123	10.8
RANK 6	2	4.3	23	10.2	28	11.8	24	9.2	18	7.4	1	2.2	7	8.6	103	9.0
RANK 7	0	.0	14	6.2	25	10.5	12	4.6	15	6.1	2	4.4	7	8.6	75	6.6
RANK 8	0	.0	6	2.7	14	5.9	6	2.3	9	3.7	1	2.2	2	2.5	38	3.3
RANK 9	0	.0	11	4.9	14	5.9	5	1.9	3	1.2	0	.0	3	3.7	36	3.2
RANK 10	1	2.1	6	2.7	7	2.9	2	.8	2	.8	1	2.2	5	6.2	24	2.1
RANK 11	0	.0	0	.0	3	1.3	2	.8	1	.4	0	.0	1	1.2	7	.6
NOT RANKED	0	.0	19	8.4	16	6.7	7	2.7	4	1.6	0	.0	4	4.9	50	4.4
TIED WITH ONE OTHER ITEM	1	2.1	2	.9	1	.4	1	.4	0	.0	0	.0	0	.0	5	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	4	1.7	2	.8	0	.0	0	.0	1	1.2	10	.9
DYE-MARKER GUNS																
RANK 1	1	2.1	5	2.2	2	.8	5	1.9	3	1.2	3	6.7	2	2.5	21	1.8
RANK 2	1	2.1	3	1.3	5	2.1	2	.8	6	2.5	3	6.7	2	2.5	22	1.9
RANK 3	0	.0	5	2.2	7	2.9	11	4.2	11	4.5	1	2.2	2	2.5	37	3.2
RANK 4	0	.0	9	4.0	10	4.2	10	3.8	16	6.6	0	.0	5	6.2	50	4.4
RANK 5	4	8.5	12	5.3	12	5.0	25	9.5	20	8.2	7	15.6	6	7.4	86	7.5
RANK 6	5	10.6	19	8.4	18	7.6	28	10.7	31	12.7	12	26.7	6	7.4	119	10.4
RANK 7	10	21.3	28	12.4	27	11.3	34	13.0	39	16.0	7	15.6	9	11.1	154	13.5
RANK 8	11	23.4	30	13.3	36	15.1	36	13.7	44	18.0	6	13.3	13	16.0	176	15.4
RANK 9	6	12.8	35	15.6	37	15.5	37	14.1	27	11.1	4	8.9	13	16.0	159	13.9
RANK 10	5	10.6	38	16.9	35	14.7	31	11.8	22	9.0	2	4.4	10	12.3	143	12.5
RANK 11	2	4.3	18	8.0	29	12.2	30	11.5	15	6.1	0	.0	7	8.6	101	8.8
NOT RANKED	2	4.3	23	10.2	20	8.4	13	5.0	10	4.1	0	.0	6	7.4	74	6.5
TIED WITH ONE OTHER ITEM	0	.0	0	.0	0	.0	1	.4	1	.4	0	.0	1	1.2	3	.3
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	5	2.1	1	.4	1	.4	0	.0	1	1.2	11	1.0

Table
II H-7 cont.

FREQUENCY DISTRIBUTION OF RANKS OF
WEAPONS, NON-LETHAL BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
ELECTRIC SHOCKERS																
RANK 1	0	.0	7	3.1	3	1.3	1	.4	3	1.2	0	.0	0	.0	14	1.2
RANK 2	1	2.1	5	2.2	6	2.5	4	1.5	4	1.6	1	2.2	2	2.5	23	2.0
RANK 3	0	.0	11	4.9	17	7.1	5	1.9	4	1.6	0	.0	5	6.2	42	3.7
RANK 4	0	.0	8	3.6	16	6.7	13	5.0	3	1.2	0	.0	8	9.9	48	4.2
RANK 5	0	.0	13	5.8	13	5.5	13	5.0	13	5.3	3	6.7	2	2.5	57	5.0
RANK 6	2	4.3	13	5.8	16	6.7	23	8.8	15	6.1	3	6.7	11	13.6	83	7.3
RANK 7	9	19.1	34	15.1	30	12.6	29	11.1	23	9.4	6	13.3	10	12.3	141	12.3
RANK 8	9	19.1	29	12.9	36	15.1	34	13.0	37	15.2	4	8.9	10	12.3	159	13.9
RANK 9	7	14.9	28	12.4	33	13.9	51	19.5	37	15.2	7	15.6	12	14.8	175	15.3
RANK 10	6	12.8	33	14.7	28	11.8	37	14.1	53	21.7	4	8.9	9	11.1	170	14.9
RANK 11	11	23.4	25	11.1	19	8.0	41	15.6	43	17.6	16	35.6	7	8.6	162	14.2
NOT RANKED	2	4.3	19	8.4	21	8.8	11	4.2	9	3.7	1	2.2	5	6.2	68	6.0
TIED WITH ONE OTHER ITEM	0	.0	0	.0	0	.0	1	.4	1	.4	0	.0	0	.0	2	.2
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	4	1.7	1	.4	1	.4	0	.0	1	1.2	10	.9
PELLET GUNS																
RANK 1	0	.0	5	2.2	3	1.3	2	.8	1	.4	0	.0	0	.0	11	1.0
RANK 2	0	.0	3	1.3	4	1.7	1	.4	4	1.6	1	2.2	0	.0	13	1.1
RANK 3	0	.0	4	1.8	5	2.1	8	3.1	3	1.2	0	.0	4	4.9	24	2.1
RANK 4	4	8.5	11	4.9	8	3.4	5	1.9	9	3.7	4	8.9	4	4.9	45	3.9
RANK 5	6	12.8	7	3.1	16	6.7	13	5.0	12	4.9	1	2.2	5	6.2	60	5.3
RANK 6	10	21.3	17	7.6	29	12.2	19	7.3	25	10.2	4	8.9	10	12.3	114	10.0
RANK 7	2	4.3	30	13.3	22	9.2	36	13.7	35	14.3	4	8.9	8	9.9	137	12.0
RANK 8	2	4.3	34	15.1	37	15.5	38	14.5	24	9.8	5	11.1	14	17.3	154	13.5
RANK 9	6	12.8	32	14.2	31	13.0	30	11.5	56	23.0	9	20.0	14	17.3	178	15.6
RANK 10	9	19.1	28	12.4	27	11.3	53	20.2	31	12.7	12	26.7	9	11.1	169	14.8
RANK 11	6	12.8	33	14.7	35	14.7	45	17.2	35	14.3	4	8.9	7	8.6	165	14.4
NOT RANKED	2	4.3	21	9.3	21	8.8	12	4.6	9	3.7	1	2.2	6	7.4	72	6.3
TIED WITH ONE OTHER ITEM	0	.0	0	.0	0	.0	2	.8	0	.0	0	.0	0	.0	2	.2
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	5	2.1	1	.4	1	.4	0	.0	1	1.2	11	1.0
TEAR GAS																
RANK 1	13	27.7	45	20.0	34	14.3	47	17.9	59	24.2	11	24.4	15	18.5	224	19.6
RANK 2	13	27.7	29	12.9	27	11.3	48	18.3	48	19.7	11	24.4	14	17.3	190	16.6
RANK 3	6	12.8	29	12.9	32	13.4	32	12.2	28	11.5	7	15.6	7	8.6	141	12.3
RANK 4	4	8.5	28	12.4	33	13.9	35	13.4	27	11.1	6	13.3	12	14.8	145	12.7
RANK 5	6	12.8	17	7.6	23	9.7	22	8.4	22	9.0	3	6.7	11	13.6	104	9.1
RANK 6	1	2.1	13	5.8	17	7.1	21	8.0	18	7.4	1	2.2	2	2.5	73	6.4
RANK 7	2	4.3	12	5.3	19	8.0	16	6.1	14	5.7	2	4.4	7	8.6	72	6.3
RANK 8	0	.0	9	4.0	10	4.2	5	1.9	8	3.3	1	2.2	3	3.7	36	3.2
RANK 9	0	.0	7	3.1	9	3.8	12	4.6	4	1.6	2	4.4	1	1.2	35	3.1
RANK 10	0	.0	8	3.6	6	2.5	10	3.8	9	3.7	0	.0	4	4.9	37	3.2
RANK 11	0	.0	8	3.6	9	3.8	5	1.9	4	1.6	1	2.2	2	2.5	29	2.5
NOT RANKED	2	4.3	20	8.9	19	8.0	9	3.4	3	1.2	0	.0	3	3.7	56	4.9
TIED WITH ONE OTHER ITEM	0	.0	1	.4	1	.4	0	.0	0	.0	0	.0	0	.0	2	.2
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	3	1.3	2	.8	0	.0	0	.0	1	1.2	9	.8

Table

II H- 7 cont.

FREQUENCY DISTRIBUTION OF RANKS OF
WEAPONS, NON-LETHAL BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
TEAR GAS DISPENSERS																
RANK 1	14	29.8	42	18.7	67	26.2	65	24.8	46	18.9	10	22.2	15	18.5	259	22.7
RANK 2	11	23.4	52	23.1	41	17.2	60	22.9	76	31.1	15	33.3	8	9.9	263	23.0
RANK 3	12	25.5	41	18.2	43	18.1	51	19.5	49	20.1	9	20.0	21	25.9	226	19.8
RANK 4	7	14.9	21	9.3	25	10.5	38	14.5	30	12.3	5	11.1	8	9.9	134	11.7
RANK 5	2	4.3	20	8.9	21	8.8	26	9.9	13	5.3	2	4.4	9	11.1	93	8.1
RANK 6	0	.0	14	6.2	8	3.4	3	1.1	12	4.9	3	6.7	4	4.9	44	3.9
RANK 7	0	.0	3	1.3	8	3.4	4	1.5	7	2.9	1	2.2	6	7.4	29	2.5
RANK 8	1	2.1	6	2.7	4	1.7	2	.8	6	2.5	0	.0	3	3.7	22	1.9
RANK 9	0	.0	3	1.3	2	.8	6	2.3	1	.4	0	.0	2	2.5	14	1.2
RANK 10	0	.0	6	2.7	4	1.7	0	.0	0	.0	0	.0	1	1.2	11	1.0
RANK 11	0	.0	3	1.3	1	.4	1	.4	0	.0	0	.0	0	.0	5	.4
NOT RANKED	0	.0	14	6.2	14	5.9	6	2.3	4	1.6	0	.0	4	4.9	42	3.7
TIED WITH ONE OTHER ITEM	0	.0	1	.4	1	.4	0	.0	0	.0	0	.0	1	1.2	3	.3
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	3	1.3	2	.8	0	.0	0	.0	1	1.2	9	.8
TEAR GAS GENERATORS																
RANK 1	2	4.3	3	1.3	6	2.5	8	3.1	11	4.5	0	.0	1	1.2	31	2.7
RANK 2	5	10.6	13	5.8	7	2.9	18	6.9	14	5.7	3	6.7	1	1.2	61	5.3
RANK 3	11	23.4	30	13.3	20	8.4	37	14.1	53	21.7	18	40.0	5	6.2	174	15.2
RANK 4	10	21.3	28	12.4	17	7.1	33	12.6	41	16.8	10	22.2	10	12.3	149	13.0
RANK 5	5	10.6	23	10.2	32	13.4	30	11.5	38	15.6	6	13.3	6	7.4	140	12.3
RANK 6	5	10.6	26	11.6	30	12.6	34	13.0	29	11.9	3	6.7	10	12.3	137	12.0
RANK 7	2	4.3	16	7.1	23	9.7	22	8.4	19	7.8	3	6.7	5	6.2	90	7.9
RANK 8	4	8.5	13	5.8	20	8.4	23	8.8	13	5.3	0	.0	11	13.6	84	7.4
RANK 9	1	2.1	20	8.9	19	8.0	18	6.9	8	3.3	1	2.2	7	8.6	74	6.5
RANK 10	0	.0	13	5.8	21	8.8	18	6.9	4	1.6	1	2.2	10	12.3	67	5.9
RANK 11	0	.0	20	8.9	24	10.1	10	3.8	5	2.0	0	.0	9	11.1	68	6.0
NOT RANKED	2	4.3	20	8.9	19	8.0	11	4.2	9	3.7	0	.0	6	7.4	67	5.9
TIED WITH ONE OTHER ITEM	0	.0	1	.4	1	.4	1	.4	0	.0	0	.0	0	.0	3	.3
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	3	1.3	4	1.7	1	.4	1	.4	0	.0	1	1.2	10	.9

ANALYSIS FOR BUILDING SYSTEMS

Table
II I-1

NATIONAL RANKS

DETENTION CENTER DESIGN/CONSTRUCTION	2
INSTITUTIONAL FURNISHINGS	5
POLICE STATION DESIGN/CONSTRUCTION	1
INSTITUTIONAL EQUIPMENT	4
BUILDING MATERIALS	3

Table
II I-2

ITEMS WITH EXTREME RANK SUMS BY DEPARTMENT TYPE
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	STATE	COUNTY	CITY(1-9 OFFICERS)	CITY(10-49 OFFICERS)	CITY(50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
	113, 162	586, 691	614, 723	710, 825	658, 769	110, 159	193, 256
DETENTION CENTER DESIGN/CONSTRUCTION	203.	499.	****	****	787.	****	****
INSTITUTIONAL FURNISHINGS	****	****	761.	880.	807.	160.	****
POLICE STATION DESIGN/CONSTRUCTION	78.	545.	352.	372.	379.	69.	123.
INSTITUTIONAL EQUIPMENT	****	****	726.	****	****	****	****
BUILDING MATERIALS	****	847.	793.	946.	879.	174.	275.

Table
II I-3

THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 46 STATE DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 213 COUNTY DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 223 CITY(1-9 OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 256 CITY(10-49 OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 238 CITY(50 OR MORE OFFICERS) DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 45 FIFTY LARGEST CITIES DEPARTMENTS.
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 75 TOWNSHIP DEPARTMENTS.

RANKS BY DEPARTMENT TYPE

	STATE	COUNTY	CITY(1-9 OFFICERS)	CITY(10-49 OFFICERS)	CITY(50 OR MORE OFFICERS)	FIFTY LARGEST CITIES	TOWNSHIP
DETENTION CENTER DESIGN/CONSTRUCTION	5	2	2	2	3	3	4
INSTITUTIONAL FURNISHINGS	4	5	3	4	4	5	3
POLICE STATION DESIGN/CONSTRUCTION	1	1	1	1	1	1	1
INSTITUTIONAL EQUIPMENT	2	3	4	3	2	4	2
BUILDING MATERIALS	3	4	5	5	5	2	5

COMPOSITE RANKS FOR ALL CITIES

DETENTION CENTER DESIGN/CONSTRUCTION	3
INSTITUTIONAL FURNISHINGS	5
POLICE STATION DESIGN/CONSTRUCTION	1
INSTITUTIONAL EQUIPMENT	4
BUILDING MATERIALS	2

Table
II I-4

THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 110 DEPARTMENTS IN LEAA REGION 1
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 127 DEPARTMENTS IN LEAA REGION 2
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 120 DEPARTMENTS IN LEAA REGION 3
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 108 DEPARTMENTS IN LEAA REGION 4
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 139 DEPARTMENTS IN LEAA REGION 5
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 103 DEPARTMENTS IN LEAA REGION 6
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 96 DEPARTMENTS IN LEAA REGION 7
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 96 DEPARTMENTS IN LEAA REGION 8
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 114 DEPARTMENTS IN LEAA REGION 9
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0000 PERCENT LEVEL FOR THE 91 DEPARTMENTS IN LEAA REGION 10

RANKS BY LEAA REGION

	1	2	3	4	5	6	7	8	9	10
DETENTION CENTER DESIGN/CONSTRUCTION	2	4	4	3	2	3	2	4	3	2
INSTITUTIONAL FURNISHINGS	5	5	5	6	5	4	4	3	4	6
POLICE STATION DESIGN/CONSTRUCTION	1	1	1	1	1	1	1	1	1	1
INSTITUTIONAL EQUIPMENT	3	3	3	2	4	2	3	2	2	3
BUILDING MATERIALS	4	2	2	5	3	5	5	5	5	5

Table
II I-5

ITEMS WITH EXTREME RANK SUMS BY LEAA REGION
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	1 292. 367	2 328. 409	3 331. 412	4 286. 361	5 354. 437
DETENTION CENTER DESIGN/CONSTRUCTION	****	****	416.	****	****
INSTITUTIONAL FURNISHINGS	376.	419.	412.	367.	441.
POLICE STATION DESIGN/CONSTRUCTION	201.	194.	211.	185.	225.
INSTITUTIONAL EQUIPMENT	****	****	****	****	****
BUILDING MATERIALS	397.	498.	445.	384.	482.

ITEMS WITH EXTREME RANK SUMS BY LEAA REGION
(NINETY-FIVE PERCENT INTERVAL GIVEN AT COLUMN HEAD)

	6 269. 342	7 252. 323	8 252. 323	9 303. 380	10 238. 307
DETENTION CENTER DESIGN/CONSTRUCTION	****	****	****	****	****
INSTITUTIONAL FURNISHINGS	352.	****	****	****	313.
POLICE STATION DESIGN/CONSTRUCTION	190.	186.	188.	203.	196.
INSTITUTIONAL EQUIPMENT	****	****	****	****	****
BUILDING MATERIALS	353.	365.	345.	431.	357.

Table

II I-6

REGARDING EACH REGION AS A RESPONDENT, IF THE TEN RANKINGS WERE RANDOM,
THE RANK SUM OF AN ITEM WOULD LIE IN THE INTERVAL (18, 42)
95 PERCENT OF THE TIME. THE FOLLOWING ITEMS LIE OUTSIDE THIS INTERVAL:
POLICE STATION DESIGN/CONSTRUCTION 10.

REGARDING EACH LEAA REGION AS A RESPONDENT,
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0006 PERCENT LEVEL.

REGARDING EACH DEPARTMENT TYPE AS A RESPONDENT, IF THE SEVEN RANKINGS WERE RANDOM,
THE RANK SUM OF AN ITEM WOULD LIE IN THE INTERVAL (11, 31)
95 PERCENT OF THE TIME. THE FOLLOWING ITEMS LIE OUTSIDE THIS INTERVAL:
POLICE STATION DESIGN/CONSTRUCTION 7.

REGARDING EACH DEPARTMENT TYPE AS A RESPONDENT,
THE COEFFICIENT OF CONCORDANCE IS SIGNIFICANT AT THE .0049 PERCENT LEVEL.

Table
II I-7

FREQUENCY DISTRIBUTION OF RANKS OF
BUILDING SYSTEMS BY DEPARTMENT TYPE

	STATE		COUNTY		CITY (1-9 OFFICERS)		CITY (10-49 OFFICERS)		CITY (50+ OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
DETENTION CENTER DESIGN/CONSTRUCTION																
RANK 1	1	2.1	90	40.0	26	10.9	28	10.7	14	5.7	8	17.8	12	14.8	179	15.7
RANK 2	2	4.3	44	19.6	66	27.7	78	29.8	76	31.1	13	28.9	22	27.2	301	26.4
RANK 3	4	8.5	18	8.0	31	13.0	32	12.2	43	17.6	3	6.7	13	16.0	144	12.6
RANK 4	7	14.9	34	15.1	28	11.8	45	17.2	33	13.5	6	13.3	5	6.2	158	13.8
RANK 5	30	63.8	23	10.2	66	27.7	71	27.1	69	28.3	15	33.3	21	25.9	295	25.8
NOT RANKED	3	6.4	16	7.1	21	8.8	8	3.1	9	3.7	0	.0	8	9.9	65	5.7
TIED WITH ONE OTHER ITEM	0	.0	2	.9	0	.0	2	.8	0	.0	0	.0	0	.0	4	.4
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	1	.4	3	1.3	0	.0	1	.4	0	.0	1	1.2	6	.5
INSTITUTIONAL FURNISHINGS																
RANK 1	3	6.4	13	5.8	14	5.9	9	3.4	10	4.1	1	2.2	4	4.9	54	4.7
RANK 2	12	25.5	49	21.8	38	16.0	49	18.7	46	18.9	8	17.8	8	9.9	210	18.4
RANK 3	13	27.7	59	26.2	51	21.4	70	26.7	56	23.0	10	22.2	28	34.6	287	25.1
RANK 4	13	27.7	56	24.9	72	30.3	75	28.6	93	38.1	17	37.8	24	29.6	350	30.6
RANK 5	4	8.5	33	14.7	41	17.2	51	19.5	31	12.7	9	20.0	8	9.9	177	15.5
NOT RANKED	2	4.3	15	6.7	22	9.2	8	3.1	8	3.3	0	.0	9	11.1	64	5.6
TIED WITH ONE OTHER ITEM	0	.0	1	.4	1	.4	0	.0	0	.0	0	.0	0	.0	2	.2
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	2	.8	1	.4	1	.4	0	.0	1	1.2	7	.6
POLICE STATION DESIGN/CONSTRUCTION																
RANK 1	30	63.8	73	32.4	158	66.4	196	74.8	185	75.8	31	68.9	50	61.7	723	63.3
RANK 2	6	12.8	49	21.8	26	10.9	28	10.7	13	5.3	7	15.6	13	16.0	142	12.4
RANK 3	5	10.6	23	10.2	18	7.6	14	5.3	8	3.3	5	11.1	5	6.2	78	6.8
RANK 4	4	8.5	32	14.2	10	4.2	10	3.8	16	6.6	1	2.2	4	4.9	77	6.7
RANK 5	1	2.1	32	14.2	11	4.6	6	2.3	15	6.1	1	2.2	3	3.7	69	6.0
NOT RANKED	1	2.1	16	7.1	15	6.3	8	3.1	7	2.9	0	.0	6	7.4	53	4.6
TIED WITH ONE OTHER ITEM	0	.0	1	.4	0	.0	2	.8	0	.0	0	.0	0	.0	3	.3
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	3	1.3	0	.0	1	.4	0	.0	1	1.2	7	.6
INSTITUTIONAL EQUIPMENT																
RANK 1	10	21.3	29	12.9	19	8.0	14	5.3	25	10.2	4	8.9	7	8.6	108	9.5
RANK 2	9	19.1	44	19.6	26	10.9	54	20.6	42	17.2	9	20.0	14	17.3	198	17.3
RANK 3	13	27.7	74	32.9	78	32.8	77	29.4	95	38.9	22	48.9	19	23.5	378	33.1
RANK 4	10	21.3	49	21.8	70	29.4	88	33.6	57	23.4	8	17.8	21	25.9	303	26.5
RANK 5	2	4.3	13	5.8	24	10.1	21	8.0	17	7.0	2	4.4	10	12.3	89	7.8
NOT RANKED	3	6.4	16	7.1	21	8.8	8	3.1	8	3.3	0	.0	10	12.3	66	5.8
TIED WITH ONE OTHER ITEM	0	.0	1	.4	1	.4	1	.4	0	.0	0	.0	0	.0	3	.3
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	2	.9	2	.8	1	.4	1	.4	0	.0	1	1.2	7	.6
BUILDING MATERIALS																
RANK 1	2	4.3	12	5.3	6	2.5	11	4.2	8	3.3	1	2.2	5	6.2	45	3.9
RANK 2	17	36.2	22	9.8	62	26.1	45	17.2	59	24.2	8	17.8	16	19.8	229	20.1
RANK 3	9	19.1	32	14.2	35	14.7	59	22.5	34	13.9	5	11.1	6	7.4	180	15.8
RANK 4	10	21.3	36	16.0	33	13.9	33	12.6	35	14.3	13	28.9	16	19.8	176	15.4
RANK 5	7	14.9	107	47.6	81	34.0	105	40.1	101	41.4	18	40.0	29	35.8	448	39.2
NOT RANKED	2	4.3	16	7.1	21	8.8	9	3.4	7	2.9	0	.0	9	11.1	64	5.6
TIED WITH ONE OTHER ITEM	0	.0	1	.4	0	.0	1	.4	0	.0	0	.0	0	.0	2	.2
TIED WITH MORE THAN ONE OTHER ITEM	0	.0	0	.0	2	.8	1	.4	1	.4	0	.0	0	.0	4	.4

Table III-2

DISTRIBUTION OF RESPONDENTS BY DEPARTMENT TYPE AND STATE

STATE	COUNTY		CITY(1-9 OFFICERS)		CITY(10-49 OFFICERS)		CITY(50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
AL	3	1.3	3	1.3	2	.8	1	.4	1	2.2	0	.0	11	1.0
AK	0	.0	2	.8	0	.0	2	.8	0	.0	0	.0	4	.4
AZ	3	1.3	5	2.1	2	.8	2	.8	1	2.2	0	.0	14	1.2
AR	2	.9	4	1.7	4	1.5	4	1.6	0	.0	0	.0	15	1.3
CA	22	9.8	17	7.1	25	9.5	24	9.8	6	13.3	0	.0	95	8.3
CO	8	3.6	3	1.3	12	4.6	9	3.7	1	2.2	0	.0	34	3.0
CT	0	.0	3	1.3	5	1.9	7	2.9	0	.0	2	2.5	18	1.6
DE	0	.0	1	.4	3	1.1	1	.4	0	.0	0	.0	6	.5
FL	2	.9	7	2.9	8	3.1	11	4.5	3	6.7	0	.0	32	2.8
GA	3	1.3	4	1.7	2	.8	3	1.2	1	2.2	0	.0	14	1.2
HI	1	.4	0	.0	0	.0	0	.0	1	2.2	0	.0	2	.2
ID	6	2.7	6	2.5	5	1.9	2	.8	0	.0	0	.0	20	1.8
IL	5	2.2	8	3.4	10	3.8	4	1.6	1	2.2	0	.0	29	2.5
IN	7	3.1	1	.4	4	1.5	3	1.2	1	2.2	1	1.2	18	1.6
IA	7	3.1	7	2.9	9	3.4	5	2.0	0	.0	0	.0	29	2.5
KS	9	4.0	3	1.3	4	1.5	5	2.0	0	.0	0	.0	22	1.9
KY	3	1.3	2	.8	1	.4	3	1.2	1	2.2	0	.0	11	1.0
LA	2	.9	2	.8	2	.8	1	.4	1	2.2	0	.0	9	.8
ME	7	3.1	5	2.1	6	2.3	2	.8	0	.0	1	1.2	22	1.9
MD	0	.0	2	.8	2	.8	4	1.6	0	.0	0	.0	9	.8
MA	2	.9	2	.8	3	1.1	13	5.3	1	2.2	10	12.3	32	2.8
MI	7	3.1	6	2.5	2	.8	7	2.9	1	2.2	5	6.2	29	2.5
MN	1	.4	2	.8	4	1.5	2	.8	1	2.2	0	.0	11	1.0
MS	0	.0	2	.8	4	1.5	2	.8	0	.0	0	.0	9	.8
MO	4	1.8	7	2.9	7	2.7	8	3.3	2	4.4	0	.0	28	2.5
MT	6	2.7	6	2.5	4	1.5	2	.8	0	.0	0	.0	19	1.7
NB	5	2.2	6	2.5	7	2.7	1	.4	1	2.2	0	.0	21	1.8
NV	3	1.3	1	.4	0	.0	1	.4	0	.0	0	.0	6	.5
NH	3	1.3	0	.0	7	2.7	1	.4	0	.0	5	6.2	17	1.5
NJ	4	1.8	6	2.5	15	5.7	9	3.7	1	2.2	14	17.3	50	4.4
NM	2	.9	1	.4	2	.8	0	.0	0	.0	0	.0	6	.5
NY	20	8.9	21	8.8	11	4.2	14	5.7	2	4.4	10	12.3	79	6.9
NC	4	1.8	5	2.1	2	.8	8	3.3	0	.0	0	.0	20	1.8
ND	3	1.3	5	2.1	5	1.9	2	.8	0	.0	0	.0	16	1.4
OH	2	.9	7	2.9	5	1.9	5	2.0	4	8.9	10	12.3	34	3.0
OK	4	1.8	1	.4	5	1.9	3	1.2	2	4.4	0	.0	16	1.4
OR	11	4.9	4	1.7	15	5.7	3	1.2	1	2.2	0	.0	35	3.1
PA	3	1.3	14	5.9	11	4.2	11	4.5	2	4.4	21	25.9	63	5.5
RI	2	.9	0	.0	1	.4	4	1.6	0	.0	0	.0	8	.7
SC	0	.0	4	1.7	1	.4	1	.4	0	.0	0	.0	7	.6
SD	4	1.8	1	.4	2	.8	2	.8	0	.0	0	.0	10	.9
TN	3	1.3	1	.4	2	.8	1	.4	1	2.2	0	.0	9	.8
TX	9	4.0	11	4.6	12	4.6	21	8.6	5	11.1	0	.0	59	5.2
UT	2	.9	6	2.5	3	1.1	3	1.2	0	.0	0	.0	15	1.3
VT	3	1.3	11	4.6	3	1.1	0	.0	0	.0	1	1.2	19	1.7
VA	11	4.9	6	2.5	6	2.3	11	4.5	1	2.2	0	.0	36	3.2
WA	7	3.1	10	4.2	8	3.1	9	3.7	1	2.2	0	.0	36	3.2
WV	5	2.2	3	1.3	2	.8	2	.8	0	.0	0	.0	13	1.1
WI	3	1.3	1	.4	4	1.5	5	2.0	0	.0	1	1.2	15	1.3
WY	2	.9	3	1.3	3	1.1	0	.0	0	.0	0	.0	9	.8
DC	0	.0	0	.0	2	.8	0	.0	1	2.2	0	.0	1	.1

Table III-5,6,8,9,11,12

AVERAGES OF GENERAL DATA BY DEPARTMENT TYPE

DEPARTMENT TYPE	AREA	POPULATION	NUMBER OF FULL-TIME OFFICERS	NUMBER OF PART-TIME OFFICERS	ANNUAL TOTAL BUDGET	ANNUAL EQUIPMENT BUDGET	ANNUAL PERSONNEL BUDGET
STATE	62580.	3936410.	889.	18.	16377358.	2304339.	12020572.
COUNTY	1518.	130254.	60.	25.	1089919.	58539.	859984.
CITY(1-9 OFFICERS)	9.	5038.	8.	5.	82381.	9764.	60061.
CITY(10-49 OFFICERS)	12.	15849.	22.	9.	257927.	24362.	206187.
CITY(50 OR MORE OFFICERS)	31.	83344.	132.	26.	1733340.	173099.	1407177.
FIFTY LARGEST CITIES	187.	851342.	2491.	1115.	43268865.	2669920.	34712818.
TOWNSHIP	28.	13228.	14.	8.	175654.	20854.	141675.

AVERAGES OF GENERAL DATA BY LEAA REGION

LEAA REGION	AREA	POPULATION	NUMBER OF FULL-TIME OFFICERS	NUMBER OF PART-TIME OFFICERS	ANNUAL TOTAL BUDGET	ANNUAL EQUIPMENT BUDGET	ANNUAL PERSONNEL BUDGET
1	750.	158112.	96.	18.	1360155.	135130.	979911.
2	648.	240781.	365.	97.	7148315.	148172.	5265546.
3	1096.	245733.	216.	7.	3412567.	435153.	2879293.
4	3691.	340996.	151.	11.	2318382.	248600.	1767292.
5	2652.	448174.	283.	8.	4916607.	431478.	3879374.
6	5738.	271386.	160.	17.	2193823.	160363.	1709910.
7	2379.	112094.	84.	9.	1220385.	121001.	983696.
8	6346.	83023.	54.	9.	728549.	77081.	568463.
9	4218.	372094.	281.	46.	5743553.	728801.	4528692.
10	3580.	104877.	69.	9.	1253894.	82198.	1011604.

NATIONAL AVERAGES OF GENERAL DATA

AREA	POPULATION	NUMBER OF FULL-TIME OFFICERS	NUMBER OF PART-TIME OFFICERS	ANNUAL TOTAL BUDGET	ANNUAL EQUIPMENT BUDGET	ANNUAL PERSONNEL BUDGET
2993.	247738.	185.	26.	3197528.	270067.	2501380.

Table III-6

DISTRIBUTION OF RESPONDENTS

DEPARTMENT TYPE	REGION 1	2	3	4	5	6	7	8	9	10	TOTAL
STATE	6	2	5	8	6	5	3	6	3	3	47
COUNTY	17	24	19	18	25	19	25	25	29	24	225
CITY(1-9 OFFICERS)	21	27	26	28	25	19	23	24	23	22	238
CITY(10-49 OFFICERS)	25	26	24	22	29	25	27	29	27	28	262
CITY(50 OR MORE OFFICERS)	27	23	29	30	26	29	19	18	27	16	244
FIFTY LARGEST CITIES	1	3	4	7	8	8	3	1	8	2	45
TOWNSHIP	19	24	21	0	17	0	0	0	0	0	81
TOTAL	116	129	128	113	136	105	100	103	117	95	1142

Table III-4

DISTRIBUTION OF RESPONDENTS BY TITLE/RANK

TITLE/RANK	NUMBER	PERCENT
CH	424	37.1
CA	123	10.8
CM	2	.2
CL	6	.5
AC	4	.4
AS	37	3.2
MJ	16	1.4
LT	109	9.5
CP	2	.2
PV	0	.0
DP	61	5.3
IN	10	.9
SH	99	8.7
CT	1	.1
SG	111	9.7
PA	37	3.2
MR	75	6.6
US	25	2.2

Table III-7

DISTRIBUTION OF RESPONDENTS BY JURISDICTION

JURISDICTION	NUMBER	PERCENT
STATE	47	4.1
COUNTY	223	19.5
CITY	619	54.2
TOWN	85	7.4
VILLAGE	63	5.5
TOWNSHIP	56	4.9
BOROUGH	40	3.5
OTHER	9	.8

Table III-8

NUMBERS OF OFFICERS IN CITY DEPARTMENTS

DEPARTMENT TYPE	ACTUAL NUMBER OF OFFICERS 1-9	10-49	50+
CITY(1-9 OFFICERS)	195	33	4
CITY(10-49 OFFICERS)	28	230	4
CITY(50 OR MORE OFFICERS)	1	7	236

Table III-10

ACTIVITIES OF RESPONDENTS BY DEPARTMENT TYPE

DESCRIPTION OF ACTIVITY	STATE		COUNTY		CITY(1-9 OFFICERS)		CITY(10-49 OFFICERS)		CITY(50 OR MORE OFFICERS)		FIFTY LARGEST CITIES		TOWNSHIP		TOTAL	
	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT	NO	PCT
CUSTODY/DETENTION-LESS THAN 1 DAY	7	14.9	178	79.1	122	51.3	191	72.9	177	72.5	36	80.0	35	43.2	746	65.3
CUSTODY/DETENTION-LESS THAN 1 WEEK	0	.0	164	72.9	47	19.7	93	35.5	111	45.5	22	48.9	2	2.5	439	38.4
CUSTODY/DETENTION-1 YEAR OR LESS	0	.0	175	77.8	16	6.7	25	9.5	33	13.5	7	15.6	1	1.2	257	22.5
CUSTODY/DETENTION-MORE THAN 1 YEAR	0	.0	30	13.3	0	.0	1	.4	3	1.2	1	2.2	1	1.2	36	3.2
TRAFFIC SAFETY AND TRAFFIC CONTROL	43	91.5	126	56.0	223	93.7	252	96.2	234	95.9	44	97.8	76	93.8	998	87.4
HIGHWAY PATROL	45	95.7	85	37.8	114	47.9	95	36.3	76	31.1	11	24.4	71	87.7	497	43.5
VEHICLE INSPECTION	26	55.3	35	15.6	49	20.6	37	14.1	33	13.5	5	11.1	7	8.6	192	16.8
TESTS FOR DRIVERS LICENSE	16	34.0	8	3.6	9	3.8	5	1.9	1	.4	1	2.2	0	.0	40	3.5
MAINTENANCE OF POLICE BUILDINGS	24	51.1	81	36.0	82	34.5	107	40.8	118	48.4	21	46.7	24	29.6	457	40.0
PUBLIC BUILDING PROTECTION	7	14.9	89	39.6	151	63.4	157	59.9	141	57.8	20	44.4	55	67.9	620	54.3
SERVICE FUNCTION	14	29.8	67	29.8	113	47.5	143	54.6	146	59.8	27	60.0	34	42.0	544	47.6
EMERGENCY AID AND RESCUE	29	61.7	150	66.7	147	61.8	165	63.0	146	59.8	30	66.7	50	61.7	717	62.8
UNDERWATER RECOVERY	16	34.0	94	41.8	14	5.9	29	11.1	38	15.6	19	42.2	7	8.6	217	19.0
HARBOR PATROL	3	6.4	31	13.8	7	2.9	5	1.9	23	9.4	14	31.1	1	1.2	84	7.4
COMMUNICATIONS FOR OWN DEPARTMENT	44	93.6	193	85.8	181	76.1	250	95.4	229	93.9	43	95.6	57	70.4	997	87.3
COMMUNICATIONS FOR OTHER AGENCY	31	66.0	127	56.4	69	29.0	105	40.1	58	23.8	11	24.4	11	13.6	412	36.1
POLICE TRAINING FOR OWN DEPARTMENT	46	97.9	123	54.7	115	48.3	202	77.1	212	86.9	45	100.0	34	42.0	777	68.0
POLICE TRAINING FOR OTHER AGENCY	36	76.6	49	21.8	6	2.5	30	11.5	102	41.8	38	84.4	8	9.9	269	23.6
BOMB DISPOSAL	21	44.7	45	20.0	11	4.6	28	10.7	56	23.0	37	82.2	1	1.2	199	17.4
POLYGRAPH	29	61.7	17	7.6	3	1.3	13	5.0	89	36.5	40	88.9	2	2.5	193	16.9
CRIMINAL INVESTIGATION	31	66.0	193	85.8	169	71.0	248	94.7	236	96.7	45	100.0	64	79.0	986	86.3
BREATH-ALCOHOL TEST	42	89.4	103	45.8	112	47.1	189	72.1	203	83.2	41	91.1	40	49.4	730	63.9
LAB ANALYSIS FOR BLOOD ALCOHOL	16	34.0	15	6.7	0	.0	3	1.1	17	7.0	24	53.3	2	2.5	77	6.7
NARCOTICS LABORATORY ANALYSIS	20	42.6	21	9.3	6	2.5	20	7.6	30	12.3	28	62.2	1	1.2	126	11.0
CRIME LABORATORY	26	55.3	14	6.2	5	2.1	19	7.3	48	19.7	33	73.3	1	1.2	146	12.8
SERVE CIVIL PROCESS	3	6.4	198	88.0	68	28.6	40	15.3	22	9.0	5	11.1	25	30.9	361	31.6
SERVE TRAFFIC AND CRIMINAL WARRANTS	33	70.2	200	88.9	199	83.6	233	88.9	229	93.9	39	86.7	75	92.6	1008	88.3
CORONER	0	.0	37	16.4	5	2.1	9	3.4	3	1.2	0	.0	2	2.5	56	4.9
ANIMAL CONTROL(DOG CATCHER)	0	.0	59	26.2	138	58.0	164	62.6	102	41.8	7	15.6	30	37.0	500	43.8
OTHER	1	2.1	16	7.1	10	4.2	19	7.3	13	5.3	1	2.2	4	4.9	64	5.6

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The report describes the methodology of and summarizes a portion of the data from the LEAA Police Equipment Survey of 1972. One of a series of seven reports resulting from this nationwide mail survey of a stratified random sample of 1386 police departments, the present report summarizes the answers of 1100 police departments concerning the need for performance standards for items of law enforcement used in their departments. Each sample department was asked to rank one list of equipment categories and nine lists of equipment items within those categories in terms of the need for standards for those equipment within their own departments. The data are presented by all responding departments, by all city departments, by seven department types, and by ten LEAA geographical regions. Data describing the characteristics of the responding departments are also presented.

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